



Zootaxa 4065 (1): 001–063

<http://www.mapress.com/j/zt/>

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Monograph

ISSN 1175-5326 (print edition)

ZOOTAXA

ISSN 1175-5334 (online edition)

<http://doi.org/10.11646/zootaxa.4065.1.1>

<http://zoobank.org/urn:lsid:zoobank.org:pub:8D812E80-0507-4B41-A220-B891A46DDAD3>

ZOOTAXA

4065

The Geometrinae of Ethiopia II: Tribus Hemistolini, genus *Prasinocyma* (Lepidoptera: Geometridae, Geometrinae)

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Magnolia Press
Auckland, New Zealand

Accepted by E. Beljaev: 7 Oct. 2015; published: 12 Jan. 2016

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(*Zootaxa* 4065)

63 pp.; 30 cm.

12 Jan. 2016

ISBN 978-1-77557-871-0 (paperback)

ISBN 978-1-77557-872-7 (Online edition)

FIRST PUBLISHED IN 2016 BY

Magnolia Press

P.O. Box 41-383

Auckland 1346

New Zealand

e-mail: zootaxa@mapress.com

<http://www.mapress.com/zootaxa/>

© 2016 Magnolia Press

ISSN 1175-5326 (Print edition)

ISSN 1175-5334 (Online edition)

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Abstract

In this paper we present a checklist and integrative revision for the genus *Prasinocyma* (Geometridae, Geometrinae, Hemistolini). With this contribution the checklist for the genus *Prasinocyma* in Ethiopia increases from eight to 40 species. Nineteen species and five subspecies are described as new for the science: *Prasinocyma pedicata aethiopica* subsp. n., *Prasinocyma angolica pseudopedicata* subsp. n., *Prasinocyma bongaensis* sp. n., *Prasinocyma getachewi* sp. n., *Prasinocyma baumgaertneri* sp. n., *Prasinocyma robusta* sp. n., *Prasinocyma shoa yabellensis* subsp. n., *Prasinocyma amharensis* sp. n., *Prasinocyma magica* sp. n., *Prasinocyma batesi distans* subsp. n., *Prasinocyma monikae* sp. n., *Prasinocyma fusca* sp. n., *Prasinocyma leveneorum* sp. n., *Prasinocyma aquamarina* sp. n., *Prasinocyma beryllaria* sp. n., *Prasinocyma lutulenta* sp. n., *Prasinocyma septentrionalis* sp. n., *Prasinocyma fallax* sp. n., *Prasinocyma trematerrai* sp. n., *Prasinocyma trematerrai simienensis* subsp. n., *Prasinocyma angulifera* sp. n., *Prasinocyma stefani* sp. n., *Prasinocyma gemmifera* sp. n., *Prasinocyma discipuncta* sp. n. *Prasinocyma thiaucourti* Herbulot, 1993 is downgraded from species rank to subspecies of *P. immaculata* (Thunberg, 1784) (stat. n.). *Prasinocyma unipuncta* Warren, 1897 is downgraded from species rank to synonymy of *P. immaculata* (Thunberg, 1784) (syn. n.). *Prasinocyma nereis* Townsend, 1952 (comb.n.) is transferred from genus *Eretmopus* to *Prasinocyma*. *Thalassodes camerunalta* Herbulot, 1986 (comb.n.) is transferred from genus *Thalassodes* to *Prasinocyma*. *Thalassodini* (syn.n.) are downgraded to synonymy of Hemistolini, here.

Key words: Lepidoptera, Geometridae, Geometrinae, Hemistolini, Thalassodini, *Prasinocyma*, Africa, Ethiopia, DNA Barcoding, integrative taxonomy, new species

Introduction

A first outline on the project of publishing a comprehensive revision of the geometrid fauna of Ethiopia including both taxonomic and faunistic treatments has been published in Hausmann et al. (2014). Based on the results of 10 years extensive sampling of various expedition groups in Ethiopia we estimate the total number of Ethiopian geometrids to exceed 700 species, but currently less than 20% of these are correctly identified and published. For instance, out of the forty Ethiopian 'emerald' species of the genus *Prasinocyma* treated in this second contribution only eight (20%) have been mentioned for the fauna of Ethiopia, previously. Furthermore, we expect the discovery of some additional *Prasinocyma* species for Ethiopia in future.

In 2009–2010, University of Molise established a first MoU with the EWCA (Ethiopian Wildlife Conservation Authority) under the project “Studies on the biodiversity of Lepidoptera in Ethiopia”. In 2013, the so far uncoordinated entomological studies on the fauna of Ethiopia have been streamlined into an official project, the “EIP” Ethiopian Insect Project, basing on a Memorandum of Understanding between the EWCA and the entomological museums in Munich, Germany, the Bavarian State Collection of Zoology (ZSM) and the Museum Thomas Witt (MWM). EIP is partner of UNESCO, NABU and AWF for entomological basic research and monitoring in Ethiopia. Different expeditions and field work operations will be managed and coordinated by the Ethiopian project coordinator Daniel Wiersbowski (daniel@dwscs.com), in collaboration with ZSM and MWM.

Material and methods

Abbreviations

BOLD	Barcode of Life Data System
CCDB	Canadian Centre for DNA Barcoding
COI	mitochondrial cytochrome <i>c</i> oxidase I (COI) gene, region near the 5' terminus (barcode fragment, 658 bp)
DAEF	Department of Agriculture, Environment and Food Sciences at the University of Molise, Campobasso (Italy)
ZSM	Bavarian State Collection of Zoology, Munich, Germany
NHM	Nature History Museum, London, United Kingdom
MNHU	Museum für Naturkunde, Humboldt-Universität Berlin

Sampling and morphological analysis. Specimens were collected by netting during daytime or at dusk, by attraction to 125W mercury vapour or miscellaneous light bulbs (in front of white sheets) powered by portable generators, by actinic light traps powered by lead batteries, and by attraction to bait.

Specimens were pinned, mounted and identified by comparison with collections, type specimens and literature or, if necessary, by genitalia dissection.

Dissection and preparation of genitalia slides were performed applying standard protocols (cf. Robinson 1976); the genitalia were embedded in Euparal and mounted on slides. Measurements were done with a reticule in a Wild M3Z microscope.

Specimens are deposited in the entomological collections of the Zoologische Staatssammlung München (Germany), and of the Department of Agriculture, Environment and Food Science at the University of Molise, Campobasso (Italy).

DNA Analysis. DNA sequencing was performed for approx. 170 Ethiopian Hemistolini specimens at the CCDB following standard high-throughput protocols (Ivanova et al. 2006; deWaard et al. 2008). PCR amplification with a single pair of primers consistently recovered a 658 bp region near the 5' end of the mitochondrial cytochrome *c* oxidase I (COI) gene that included the standard 648 bp barcode region for the animal kingdom (Hebert et al. 2003). DNA extracts are stored at the CCDB, with aliquots being deposited in the DNA-Bank facility of the ZSM (see <http://www.zsm.mwn.de/dnabank/>). All sequences are deposited also in GenBank according to the iBOL data release policy. Complete specimen data including images, voucher deposition, GenBank accession numbers, GPS coordinates, sequence and trace files can easily be accessed in the Barcode of Life Data System (Ratnasingham & Hebert 2007) in the public data set DS-GEREETYE (doi: [dx.doi.org/10.5883/DS-GEREETYE](https://doi.org/10.5883/DS-GEREETYE)).

Data Analysis. Sequence divergences for the barcode region were calculated using the Kimura 2 Parameter model, employing the analytical tools on BOLD. Genetic distances between species are reported as minimum pairwise distances, while intraspecific variation is reported as maximum pairwise distances. A neighbour joining tree with all barcoded species of this article is shown in Fig. 110. For species delineation we refer to the BIN-system (Barcode Index Numbers) on BOLD (Ratnasingham & Hebert 2013).

Taxonomy and nomenclature. Systematical order and attribution to tribes was taken from Hausmann (1996; 1999; 2006); the nomenclature follows Scoble (1999) and Scoble & Hausmann (2007).

List of collection sites. Localities and collateral data are reported here in the spelling of the collection labels. Spelling errors, (different) multiple spellings for the same localities and different ways to present coordinates are transferred here exactly in the original form. In a few cases, German terms are translated or corrections given in brackets.

In the systematic account the specimen data are referring to the numbers in the following list, grouped by the larger administrative regions of Ethiopia as established in 1991. Most of the specimen data are from Oromia region and Southern Nations, some from Addis Ababa, Amhara and Gambela. In addition to the numbered locality reference the name of the sub-region (usually the old, smaller administrative region, e.g. Bale, Shewa/Shoa, Sidamo/Sidama, Kaffa/Kefa) is indicated in the systematic account. In new descriptions the complete label data are presented as written on the label. The material is deposited at the ZSM unless stated otherwise. Parts of the material will be transferred to Ethiopia for building up a national reference collection.

- 1 Ethiopie [Ethiopia], Arussi, Lac. Langano [7.66°N 38.81° E], 6.III.1981, leg. P.C. Rougeot.
- 2 Ethiopie [Ethiopia], Choa, Debre-Zeit [8.75°N 39.00° E], 1800m, 21.III.1986, leg. F. Thiaucourt.
- 3 Äthiopien [Ethiopia], Arba Minch, Reg. Omo, Prov. Gemu Gofa [5.98° N 37.60° E], 1350–1450m, 27.V.2004, leg. R. Beck & M. Hiermeier. (=‘Gamo Gofa’, lg. S. Naumann & H. Schnitzler, 4.V.2008).
- 4 E. Ethiopia, Hararge, Hirna, Kara Jara [9.24° N 41.14° E], 2180m, 20.IV.2006, leg. R. Beck & Tamrat.
- 5 SE. Ethiopia, Bale, 11 km SW. Goba [6.935° N 39.950° E], 3140m, Bale-Mts. 26.IV.2006, leg. R. Beck & Tamrat.
- 6 SE. Ethiopia, Bale, 13 km sw Goba [6.924° N 39.940° E], 3100–3300m, Hangaso, 7–12.X.2007, leg. R. Beck, M. Dietl, G. Riedel.
- 7 Ethiopia, Kaffa Prov., 5 km e Jim[m]a, 1800m 7°40'N 36°55'E, 28.IV.2008, leg. S. Naumann, H. Schnitzler.
- 8 Ethiopia, Prov. Kaffa, 10 km n Bonga, 1550m 7°21'N 36°25'E, 29.IV.2008, leg. S. Naumann, H. Schnitzler.
- 9 W. Ethiopia, Kaffa, 9.V.2008, 30 km nnw Jimma [7.889° N 36.783° E], 1650m, leg. R. Beck, G. Riedel.

- 10 W. Ethiopia, Kaffa, 11 km nnw Jimma [7.752° N 36.800° E], 10–15.V.2008, 2060m, leg. R. Beck, G. Riedel.
- 11 S. Ethiopia, Sidano, 16 km sw Kibre, Mengist, 1700m, 5.8107° N 38.8880° E, 25–26.III.2009, leg. R. Beck, M. Dietl.
- 12 S. Ethiopia, Sidamo, 13 km, w Yabello, Motel, 1960m, 4.90° N 38.01° E, 28–30.III.2009, leg. R. Beck, M. Dietl.
- 13 Ethiopia, Oromia Region, sw Shewa Zone, Wenchi Crater Lake [8.781° N 37.891° E], 2900m (lux) 19.IV.2009, leg. A. Sciarretta, G. Spina.
- 14 Ethiopia, Bale Mountains—Dinsho [7.099° N 39.790° E], 3100m (lux) 25.IX.2009, leg. A. Palladino, F. Parisi.
- 15 Ethiopia, Prov. Oromiya, between Leku and Wendo, 2 km E. Abosto, 6°44,950' N 38°26,612' E, 15–19.V.2010, 1800m, leg. H. Sulak.
- 16 Äthiopien [Ethiopia], Äthiopisches Hochland [Ethiopian Highlands], Prov. Sidamo/Oromia, Yabello, 17 km Wildlife Sanctuary OSO, 1580m, (Dornbuschgebiet), 04°51.010' N, 38°14.783' E, 16.V.2012, leg. Dietl M. + S. & R. Beck.
- 17 Äthiopien [Ethiopia], Ostafrikanischer Graben [East African Rift Valley], Prov. Gamu Goffa, Arba Minch, 12 km NNO 1620m, 06°08.311' N 37°34.953' E, 23.V.2012, leg. Dietl M. + S. & R. Beck.
- 18 Äthiopien [Ethiopia], Ostafrikanischer Graben [East African Rift Valley], South Nation, Bonga, 16 km E, 2440m, 07°11' N 36°28' E, 04.V.2013, Beck R. & R. Wanninger leg.
- 19 Äthiopien [Ethiopia], Ostafrikanischer Graben [East African Rift Valley], South Nation, Bonga, 25 km E, 2720m, 07°19' N 36°00' E, 04.V.2013, Beck R. & R. Wanninger leg.
- 20 Äthiopien [Ethiopia], Ostafrikanischer Graben [East African Rift Valley], South Nation, Bonga-Hotel, 1700m, 07°21' N 36°07' E, 06.V.2013, Beck R. & R. Wanninger leg.
- 21 Äthiopien [Ethiopia], Ostafrikanischer Graben [East African Rift Valley], South Nation, Wushwush, 7,4 km W, 1910m, [07.304 N 36.057 E], 07.V.2013, Beck R. & R. Wanninger leg.
- 22 Äthiopien [Ethiopia], Äthiopisches Hochland [Ethiopian Highlands], Prov. Sidamo/Oromia, Yabello, 7 km W Yabello, 1955m, (Bergwald) 04°55' N 38°02' E, 14.V.2013, Beck R. & R. Wanninger leg.
- 23 Äthiopien [Ethiopia], Ostafrikanischer Graben [East African Rift Valley], Prov. Gamu Goffa, Arba Minch, Nachisar Nationalpark 1180–1380m, 06°00' N 37°47' E, 17–19.V.2013, Beck R. & R. Wanninger leg.
- 24 Ethiopia, Arba Minch, Reg. Omo, Prov. Gemu Gofa, 1350–1450m 6°0'N 37°33'E, 24.V–4.VI.1999, leg. Beck/Hiermeier.
- 25 C. Ethiopia, Bale Mts., Reg. Bale, Umg. Dinsho, 3050–3100m N7°07'E 39°38', 14.V.–23.V.1999, leg. Beck/Hiermeier.
- 26 S. Ethiopia, Arba Minch, 16–26.IX.2000, leg. R. Beck.
- 27 S. Ethiopia, Arba Minch, Reg. Omo, Prov. Gemu Gofa, 1350–1450m 6°0'N 37°33'E, 14.IV–2.V.2001, leg. G. Riedel.
- 28 Ethiopia, West Shewa, Ambo, 2200m a.s.l., V.2007, leg. V. Kravchenko & G. Müller.
- 29 Ethiopia, West Shewa, Wenchi Crater Lake, 3300m a.s.l., V.2007, leg. V. Kravchenko & G. Müller.
- 30 S. Ethiopia, Sidamo, V.2008, 1520m, 13 Km se Yabello, leg. R. Beck, G. Riedel.
- 31 Ethiopia, Kaffa, 27 km to Bonga, 1900m, 7°18'N 36°10'E, 1.V.2008, leg. S. Naumann, Schnitzler.
- 32 W-Ethiopia, Kaffa, 11 km nw Jima, 10–15.V.2008, 2060m, leg. R. Beck, G. Riedel.
- 33 SE Ethiopia, 19–23.V. 2008, Bale, Bale Mts., 3100–3300m, ca 12 km sw Goba, leg. R. Beck, M. Dietl, G. Riedel.
- 34 S. Ethiopia, Sidamo, 16 km, SW Kibre Mengist, 1700m, 5.8107°N 38.8880°E, 25–26.III.2009, leg. R. Beck, M. Dietl.
- 35 Ethiopia, Addis Ababa Biofarm 2400m (lux) 9.IX.2009, leg. A. Palladino, F. Parisi., A. Sciarretta, coll. DAEF.
- 36 Ethiopia, Bale Mountains, Sanetti plateau 4000m 28.IX.2009, leg. A. Palladino, F. Parisi. A. Sciarretta, coll. DAEF.
- 37 Ethiopia Prov. Oromiya ZW. Deritu & Dubuluk, Umg. Deritu, N04°42,246 E38°10,252, 20.IV.2010–1590m-lux, leg. H. Sulak.
- 38 Ethiopia, Bale mountains, Harennä Forest 1600m (lux) 21.II.2010, leg. F. Parisi. A. Sciarretta, coll. DAEF.
- 39 Ethiopia, Bale mountains, Harennä Forest 1800m (lux) 22.II.2010, leg. F. Parisi. A. Sciarretta, coll. DAEF.
- 40 Ethiopia, Bale mountains, Harennä Forest Karcha Camp 2350m (lux) 20.II.2010, leg. F. Parisi, A. Sciarretta, coll. DAEF.

- 41 Äthiopien, Addis Ababa 22.X.1980, Dr. Angenstein Mgdb. DDR, coll. MNHU
- 42 Ethiopia, [Gambela], Illubabor zone, Bedelle, Mute Forest, 2060m, 27.I.2012, coordinate UTM 37P 207285E, 938068N, Sciarretta A., Parisi F. leg., coll. DAEF
- 43 Äthiopien, Arba Minch, Reg. Omo, Prov. Gemu Gofa, 06°00.196'N, 037°33.043'E, 1350–1450m, 27.V.–04.VI.1999, leg. R. Beck & M. Hiermeier.
- 44 S. Ethiopia, Gemu Gofa, Omo, Arba Minch, 1335m, 6.0161°N, 37.5590°E, 24.XII.2013, D. Wiersbowsky.
- 45 Ethiopia, Sidamo prov., 9 km N Mega, 1700m, 4°08'N 38°18'E, 7.V.2008, S. Naumann, H. Schnitzler.
- 46 S. Ethiopia, Gamu Gofa, Arba Minch, 1100–1400m, 14–18.X.2007, leg. R. Beck, G. Riedel.
- 47 Ethiopia, Oromia, [Sidamo], 7 km S Kibremengist, 1500m, 21.IV.2009, 5°48'46"N, 38°57'41"E, S. Naumann, H. Schnitzler.
- 48 S. Ethiopia, Oromia, 13 km S Agere Maryam, 1960m (lux), 5.5149°N, 38.2529°E, 7.XI.2010, leg. de Freina, Hacker, Peks, Schreier.
- 49 Ethiopia, Bale mountains, Harenn Forest 1600m (lux) 27.IX.2009, leg. Palladino, Parisi, Sciarretta, coll. DAEF.
- 50 S. Ethiopia, Oromia, [Sidamo], 7 km NW Yabelo, 1950 m (lux), 4.9252°N, 38.0435°E, 9.XI.2010, leg. de Freina, Hacker, Peks, Schreier.
- 51 S. Ethiopia, Oromia, 1 km W vill. Aluweya, 1300 m (lux), 4.9636°N, 37.5489°E, 10.XI.2010, leg. de Freina, Hacker, Peks, Schreier.
- 52 Äthiopien [Ethiopia], Äthiopisches Hochland [Ethiopian Highlands], Prov. Sidamo, Oromia, Yabello Motel, 9 km SO, 1500m, 04°35.690'N, 38°14.408'E, 18.V.2012, Dietl M. + S. & R. Beck.
- 53 Äthiopien [Ethiopia], Reg. Sidamo/Oromia, Prov. Bale, Goba, Sof Omar, 1220m, 06°54.346'N, 40°51.004'W, 10.V.2012, Dietl M. + S. & R. Beck.
- 54 Äthiopien [Ethiopia], Äthiopisches Hochland [Ethiopian Highlands], Prov. Sidamo, Oromia, Yabello, 17 km OSO 1580 m (Dornbuschgebiet), 04°51.010'N, 38°14.783'E, 16.V.2012, Dietl M. + S. & R. Beck.
- 55 Äthiopien [Ethiopia], Reg. Sidamo/Oromia, Prov. Bale, Goba, Sof Omar, 1570m, 06°55.620'N, 40°43.004'O, 27.V.2012, Dietl M. + S. & R. Beck.
- 56 Äthiopien [Ethiopia], Prov. Sidamo, Oromia, Kibremengist, 11,5 km S, 1730m, 05°47.446'N, 38°57.864'O, 15–16.V.2012, Dietl M. + S. & R. Beck.
- 57 C. Ethiopia, Oromia, southern Bale Mts, Harenn Forest, 2385m, 6.7139°N, 39.7268°E, 28.XII.2013–10.I.14, D. Wiersbowsky.
- 58 Äthiopien [Ethiopia], Äthiopisches Hochland [Ethiopian Highlands], Prov. Sidamo, Oromia, Yabello, 15 km O, 1550m, (Dornbuschgebiet), 04°51'N, 38°13'O, 15.V.2013, Beck R. & R. Wanninger leg.
- 59 Ethiopia, "Prov. Oromiya" [Amhara], ZW. Debre Sina & Sembo, Umg. Debre Sina, N09°35.0650, E39°44.417, 06.IV.2010, 2730 m—lux, leg. H. Sulak.
- 60 Ethiopia, Prov. Amara, btw. Debre Sina and Sembo, env. Debre Sina, 2730m, N09°35,065 ; E39°44,417, 06.IV.2010, leg. H. Sulak.
- 61 S. Ethiopia, Oromia, 3 km NNE vill. Finchawa, 1760 m (lux), 5.4193°N, 38.2862°E, 8.IX.2010, leg. de Freina, Hacker, Peks, Schreier.
- 62 Ethiopia, Kaffa Prov., rd. Wshwsh 10 km to Bonga, 1700m, 7°16'N 36°12'E, 2.V.2008, S. Naumann, H. Schnitzler.
- 63 S. Ethiopia, Gamu Gofa, V.2008, Arba Minch 1350m, leg. R. Beck, G. Riedel.
- 64 C. Ethiopia, Oromia, Southern Bale Mts, Harenn Forest, Katcha clearing, 1810m, 6.6167°N–39.7782°E, 21.II.–7.III.2014, D. Wiersbowsky.
- 65 SE. Ethiopia, Bale, Bale Mts., 15 km sw Goba. 3100m, 6.9287N 39.9406E, 21.III.2009, leg. R. Beck, M. Dietl.
- 66 SE. Ethiopia, Bale, Bale Mts. 10 km S Rira, 2450m, 6.8092N 39.6386E, 25.III.2009, leg. R. Beck, M. Dietl.
- 67 SE. Ethiopia, Bale, Bale Mts., 15 km sw Goba. 6.9287N 39.9406E, 23.III.2009, leg. R. Beck, M. Dietl.
- 68 Aethiopien, Prov. South Nation, Bonga-Hotel, 1720 m, 07°16.444 N, 36°14.769' O, 24.VI.2014, Riedel G. & Beck R. leg.
- 69 S. Ethiopia, Arba Minch, Reg. Omo, Prov. Gemu Gofa, 1350–1450m 6°00.196'N 037°33.043'E, 27.V.–04.VI.1999, leg. Beck/Hiermeier.
- 70 Ethiopia, Gamu Gofa, Konso Hotel, 1300m, 5°20'N 37°26'E, 5.V.2008, S. Naumann, H. Schnitzler.
- 71 Ethiopia, Gamu Gofa, nr Arba Minch, 1400m, 6°15'N 37°30'E, 4.V.2008, S. Naumann, H. Schnitzler.

- 72 Ethiopia, Oromia, Bale, Dinsho headq., 3000m, 30.IV.2009, 7°05'N 39.47'E, S. Naumann, H. Schnitzler.
- 73 Ethiopia, "Prov. Oromia" [Southern Nations], btw. Leku and Wendo, env. Abosto, 1790m, N06°44,950; E38°26,612, 15–19.VI.2010, leg. H. Sulak.
- 74 Ethiopia, Sidamo [Southern Nations] Zereabruk, 1700m, 6°32'N38°26'E, 8.V.2008, S. Naumann, H. Schnitzler.
- 75 Äthiopien [Ethiopia], Ostafrikanischer Graben [East African Rift Valley], Prov. Gamu Goffa, Arba Minch, 1330m, 05°59.924'N, 37°32.896'O, 21–25.V.2012, Dietl M. + S. & R. Beck.
- 76 Äthiopien [Ethiopia], Ostafrikanischer Graben [East African Rift Valley], Prov. Gamu Goffa, Kay Afer, 3 km S, 1510m, 05°31'N, 36°43'O, 10.V.2013, Beck R. & R. Wanninger leg.
- 77 Äthiopien [Ethiopia], Ostafrikanisches South Nation, Wushwush 7,4 km w, 1910m, 07°18'.16.05"N [07.304 N 36.057 E], 7.V.2013, Beck R. & R. Wanninger leg. (=21)
- 78 Äthiopien [Ethiopia], Ostafrikanischer Graben [East African Rift valley], Mago, 14 km W Jinka, 980m, 05°46' N, 36°26'O, 11.V.2013, Beck R. & R. Wanninger leg.
- 79 Äthiopien [Ethiopia], Ostafrikanischer Graben [East African Rift valley], Turmi, 6 km N, 960m, 05°01'N, 26°28'O, 12–13.V.2013, Beck R. & R. Wanninger leg.
- 80 C. Ethiopia, Oromia, southern Bale Mts, Harennä Forest, 2385m, 6.7139°N, 39.7268°E, 28.XII.2013–10.I.14, D. Wiersbowski.
- 81 C. Ethiopia, Oromo, Menegecha Suba Forest, 2630m, N8°58'45.15", E38°32'51.75", 2–3.XI. 2013, D. Wiersbowski.
- 82 Äthiopien 11.–16.I.1996, [Amhara], Tana-See, Bahir Dar 1600 m, leg. Mey & Ebert, coll. MNHU.
- 83 Ethiopia, Debark, Simien Mountains, Sankaber Camp, 13°13'51"N/38°02'25"E, 3250m, Afro-alpine meadow/shrubland, 31.X.2011, leg. H. S. Staude.
- 84 Ethiopia, Debark, Simien Mountains, Chennak Camp, 13°15'40"N/38°11'40"E, 3633 m, Afro-alpine meadow/shrubland, 01.XI.2011, leg. H. S. Staude.
- 85 Ethiopia, Bale Mountains, Harennä Forest, Afro-montane forest, 06°42'58"N/39°43'31"E, 2381m, 29.X.2011, leg. H. S. Staude.
- 86 Ethiopia, Bale Mountains, Dinsho, Juniper/Hagenia woodland, 676°05'45"N/39°47'31"E, 3275m, 27.X.2011, leg. H. S. Staude.
- 87 Ethiopia, north Bale Mountains, Dinsho, 07°02'N/40°00'E, 3400m, 24.–25.III.2011, leg. S. C. Collins.
- 88 SE Ethiopia, Bale 13kmsw Gobe 3100–3300m, Hangaso, 7–12.X.2007, R.Beck M Dietl G.Riedel.
- 89 Äthiopien [Ethiopia], Äthiopisches Hochland [Ethiopian Highlands], Prov. Sidamo, Oromia, Yabello, 15 km O, 1550m, (Dornbuschgebiet), 04°51'N, 38°13'O, 15.V.2013, Beck R. & R. Wanninger leg.
- 90 Äthiopien [Ethiopia], Äthiopisches Hochland [Ethiopian Highlands], Prov. Sidamo, Oromia, Yabello, 7 km W, 1955m, (Bergwalf [mountain forest]), 04°55'29" N, 38°02'O, 14.V.2013, Beck R. & R. Wanninger leg.
- 91 Ethiopia, Bale Mountains—Dinsho [7.099° N 39.790° E], 3100m (lux) 25.IX.2009, leg. Palladino, Parisi, Sciarretta, coll. DAEF.
- 92 Äthiopien [Ethiopia], Bale Mountain Nationalpark, Reg. Oromia/Sidamo, Prov. Bale, Sura 4 km W, 06.558 N, 39.567 E, 09.V.2012, Dietl M. + S. & R. Beck.
- 93 C. Ethiopia, Oromia, southern Bale Mts, Harennä Forest, 1825m, 06°37.101 N, 39°46.422 E, 16.–25.XI.2014, D. Wiersbowski.
- 94 Äthiopien [Ethiopia], Ostafrikanischer Graben, Provinz South Nations, Wushwush 16 km W Bonga, 1910m, 07°18.184 N 36.03.520 E, 21.VI.2014, Riedel, G. & Beck R.
- 95 Äthiopien [Ethiopia], Ostafrikanischer Graben, Provinz South Nations, Bonga, 12km E, 2414m, 07°17.652 N 36.22.567 E, 23.VI.2014, Beck, R. & G. Riedel
- 96 Äthiopien [Ethiopia], Ostafrikanischer Graben [East African Rift valley], Mago Nationalpark, 1217m, 06°47.365' N, 36°27.475'O, 2.VII.2014, Beck, R. & G. Riedel
- 97 Äthiopien [Ethiopia], Sidam/Oromaio, Kibre Mengist, 11,5km S, 1730m, 5°47.446' N 38°57.864' E, 15.–16.V.2012, Dietl, M. + S. & R. Beck
- 98 Äthiopien [Ethiopia], Ostafrikanischer Graben, Provinz South Nations, Bonga Hotel, 1720m, 07°16.444 N 36.14.769 E, 24.VI.2014, Beck, R. & G. Riedel
- 99 Äthiopien [Ethiopia], Bale Mountains, Reg. Sidamo Kifle Hager, Catcha nr. Rira, 2350m, 06°42.899' N 39.43.441' E, 07.IV.2010, Dietl, Monika + Michael, R. Beck, H. Belkele leg.

Systematic part

Geometrinae

Tribe Hemistolini Inoue, 1961

The tribe Hemistolini was described by Inoue (1961), but its differential diagnosis from the tribe Hemitheini is not always free of conflicts, and in certain genera there are transitional feature combinations. For that reason Holloway (1996) included Hemistolini as a synonym into his very broad concept of his "sub-tribe Hemitheiti". Pitkin (1996) and Han & Xue (2010), in their reviews of the of South-American and Chinese emerald moths respectively, partly followed this view but applied a narrower concept and raised the Hemitheini back to tribe rank. In both monographs Hemistolini are subordinated under Hemitheini. Pitkin (1996) lists for "Hemitheini s.str." the following typical characters: Uncus slender, rod-like and pointed or tapered, socii usually similar to uncus in shape and size. Posterior margin of sternum A8 usually without processes, but with some exceptions. Green wing colour prone to fading. According to Holloway (1996) the hemitheine socii are "never shorter than half length of uncus and hindwing veins M3 and CuA1 are usually stalked".

Hemistolini are recognized at tribe level in Hausmann (1996; 2001), listing a number of characteristic features which delimit, in different combinations, a group of emerald moths that may be regarded as sister tribe of Hemitheini. These characteristic features for Hemistolini (most of them unusual for or absent from Hemitheini) include sclerotized gnathos, short socii (half length of uncus or shorter, sometimes vestigial, but as long as uncus in many *Hemistola* and *Thalassodes* species), shape of juxta (extended, not upright down U-shaped sclerite), modifications of saccus (usually sclerotized and/or with processes, but simple in *Thalassodes* and *Androzeugma*), concave ventral margin of valva, shape of sternum A8 (usually forked or bilobous), bipectinate male antennae (with a few exceptions, e.g. lamellate in *Androzeugma*), reduction of male frenulum (weak, reduced or absent), and hindwing venation (M3 and CuA1 often connate or shortly stalked only, stalked in *Thalassodes*).

Both Hemistolini and Thalassodini have been described in the same publication (Inoue 1961). Thalassodini would have 'page priority' which is, however, not a principle justified by the Code (ICZN). Because of the much wider usage of the taxon Hemistolini in literature, we propose to use this name with Thalassodini as synonym (Hemistolini = Thalassodini **syn.n.**).

The large (mainly African) genus *Prasinocyma* was attributed to tribe Hemistolini in Hausmann (1996: 33; 2001: 158). In Hausmann (2006) the African genera *Victoria*, *Prasinocyma* and *Celidomphax* have been listed under Hemistolini, in Hausmann (1996) also *Lophostola*, *Lophorrhachia* and *Antharmostes*. In addition, the genera *Heterorachis*, *Androzeugma*, *Thalassodes* and *Omphax* should be included into a broader concept of Hemistolini, as partly and tentatively indicated in Hausmann (1996: 32).

Genus *Prasinocyma* Warren, 1897

Type species: *Thalassodes vermicularia* Guenée, 1858 (South Africa: Northern Cape: Namaqualand) by original designation.

Prasinocyma is an enigmatic, taxonomically difficult genus, megadiverse in Africa, with 98 known species, most of them described before 1930. Eight species are described from Ethiopia, three from Saudi Arabia, one each from Sudan and Somalia, 11 from Kenya and 15 from Uganda. However, most species of the last mentioned country are from Ruwenzori Region in the south-west, close to the Congo basin. The genus still lacks a comprehensive revision. The more recent descriptions are all done as single descriptions in the framework of national treatments. In many cases the description is based on just one sex and not rarely it remains unclear which males match with which female.

DNA barcoding brings together a lot of data, males can easily be matched with females and the genetic distances of populations from different regions of Africa are showing deep 'barcode gaps' and thus are reflecting

quite well their interspecific relationships. So far we have gathered more than 400 barcodes for African members of the genus *Prasinocyma* belonging to 140 BINs (cf. Fig. A) with 20 additional lineages clearly referring to further *Prasinocyma* species but without BIN assignment (fragment lengths <500 bp). The accumulation curve of African *Prasinocyma* species (Fig. A) suggests saturation far beyond 200 species—perhaps even beyond 300. This means that species assessment in this genus is still at the very beginnings for the whole of the continent.

For verifying the identifications we have dissected more than 150 individuals (mainly males) of Ethiopian members of this genus, studies on original descriptions, type examinations in collection Herbulot (ZSM) and in the NHM (London).

In this work we raise the number of known *Prasinocyma* species for the fauna of Ethiopia from eight to 40, two of these species show subspecific divergences within the territory of Ethiopia. One further, undescribed species is analysed and presented here but set back for a later formal description due to the poor conservation status of the singleton.

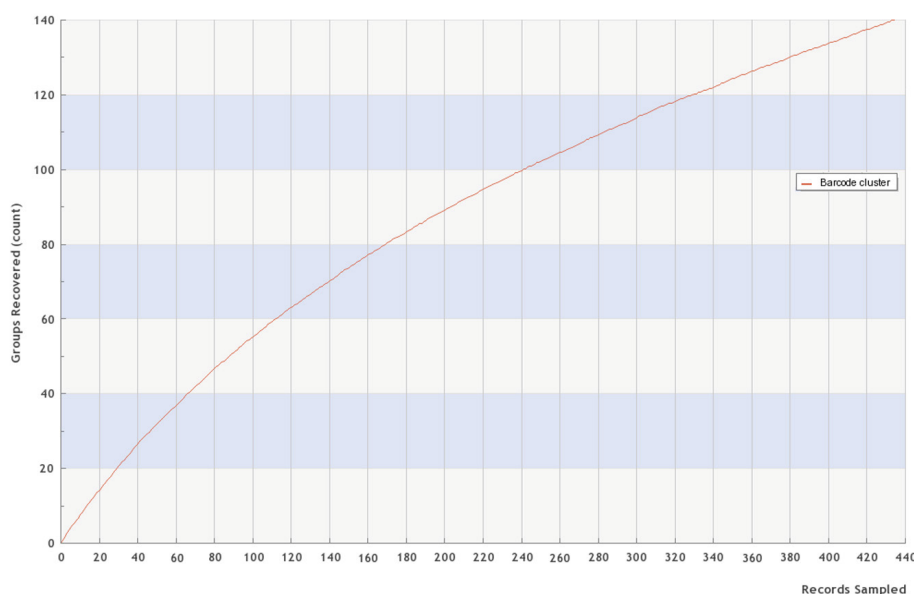


FIGURE A. Accumulation curve for DNA barcode clusters (source: BOLD database, <http://www.boldsystems.org/> accessed 3.12.2014) of African members of the genus *Prasinocyma*.

The genus was poorly defined by Prout (1930), just indicating presence of frenulum in male and its absence in female, the 'lack of specialized structures', third segment of female palpi 'more or less elongate', and hindwing termen rounded or slightly angled at M3. Presence of coremata at base of valvae and elongate shape of valva with concave ventral margin shared with genus *Thalassodes*, but the latter with the following important differential characters (cf. Holloway 1996): *socii* present, long and narrow, sternum A8 unmodified or slightly only, typically also angled hindwing termen and pale transverse lines. Most species show pale 'strigulae' (Janse 1935) densely irrorated over the green ground colour.

Prout (1930) based the order (sequence) of species on the presence/absence of discal dots and dots at the inner termen, but such criteria are not reliable for a solid and reliable classification. In this paper, we list the species in more natural species-groups according to relationships as they are revealed by a combined analysis of genitalia and DNA barcodes. These allow to arrange the 40 Ethiopian species in the following groups: (a) the *immaculata* species-group with eleven species (b) the *nereis* species-group with eighteen species (c) the *aetheraea* species-group with five species (d) the *bifimbriata* species-group with six species. For all groups we found synapomorphies, mainly in male genitalia (see species-group descriptions). Generally the male genitalia of *Prasinocyma* bear valuable differential features at species level, common features are the lacking or vestigial, short *socii*, almost all species show a membranous, subterminal, ventral lobe at the valva, sacculus and/or harpe usually sclerotized, sternum A8 often bilobous or with paired projections.

In the descriptions of wing coloration of *Prasinocyma* species we just differentiated between “bluish green” and “leaf green”, such as between “pale (bluish/leaf) green” and “deep (bluish/leaf) green”. Any further differentiation is not helpful in our opinion.

The *immaculata* species-group

Eleven species in Ethiopia, including two pairs and one triade of sister species: *P. pedicata*—*P. pseudopedicata* **sp. n.**; *P. pumilata*—*P. tranquilla*; *P. getachewi* **sp. n.**—*P. baumgaertneri* **sp. n.**—*P. oblita*. The *immaculata* species-group is very ‘robust’ in genetical analyses using different alignment parameters, algorithms, and also when excluding the third codon. Most species are small. In male genitalia the group shows quite uniform characters, the uncus is sometimes dilated (*P. getachewi* **sp. n.**, *P. baumgaertneri* **sp. n.**), the valva long and slender, without or with short projections only, sacculus not sclerotized, aedeagus at centre often with caecum, sternum A8 without posterior lobes, evenly bordered or sometimes with very narrow, tapering projections.

Prasinocyma immaculata (Thunberg, 1784)

Geometra immaculata Thunberg (1784): 8. Locus typicus: ‘Sweden’ (ex errore), possibly South Africa (cf. Karsholt & Nielsen 1985; Hausmann 2001).

Prasinocyma immaculata thiaucourti Herbulot, 1993, stat. n.

(Figs 1, 43, 80)

Prasinocyma thiaucourti Herbulot (1993): 50. Locus typicus: Ethiopia, Deberi Zeit, 1800 m. Herewith downgraded from species to subspecies rank. Holotype ZSM/Herbulot: examined with abdomen brushed and DNA barcoded (BC ZSM Lep 76117, 67700, both legs sequenced to a 164bp fragment). Two (♂♀) paratypes dissected (ZSM G 19501, 19502). Sequence of holotype diverging from those of *P. immaculata* of other Ethiopian localities (Arba Minch, Yabelo, Ambo a.s.o. see below) in 4 nucleotide positions (264, 282, 297, 339; 4/164 = 2.5%), which are not editing errors. Synonymy, however, suggested by the absolute lack of differential features in both ♂ and ♀ genitalia.

Further taxa subordinated under *Prasinocyma immaculata*:

Thalassodes scissaria Felder & Rogenhofer, 1875: pl. 127, fig. 9. Locus typicus: South Africa, Grahamstown; one Syntype ♂ in NHM, examined. Synonym of nominate subspecies (Scoble 1999).

Prasinocyma unipuncta Warren, 1897: 44. Locus typicus: South Africa, Natal, Weenen (Holotype ♂ NHM, examined). Validated at species rank by Scoble (1999), herewith downgraded to synonymy (syn. n.).

Prasinocyma degenerata Prout, 1913: 420. Locus typicus: south-west Uganda / north-east Zaire: Ruwenzori, 3500 ft (Holotype ♂ NHM, examined. Validated at subspecies rank under *P. immaculata* by Scoble (1999).

Material. Oromia: 1♂, Sidama (locality no. 30; BC ZSM Lep 14896; gen.prp. ZSM G 19396); 4♂, West Shoa (no. 28; BC ZSM Lep 10073, 10083, 16448, 16477; gen.prp. ZSM G 19397); 1♂, Bale (no. 6); 1♂, Sidama (no. 45), 1♂, Sidama (no. 12); 1♀, Sidama (no. 89; BC ZSM Lep 78492; gen.prp. 19661); 1♂, Bale (no. 88). **Gambela:** 1♂, Illubabor (no. 42) (Gen. DAEF prep. GF). **Southern Nations:** 1♀, Leku-Wendo (no. 15; BC ZSM Lep 47378); 1♂, Kaffa (no. 68); 6♂3♀, Arba Minch (no. 27; BC ZSM Lep 13168, 13172, 13178; gen.prp. ZSM G 19424, 19439, 19440); 2♂1♀, Arba Minch (no. 26; BC ZSM Lep 13171; gen.prp. ZSM G 19659, 19436); 1♀, Arba Minch (no. 43; BC ZSM Lep 13170; gen.prp. ZSM G 19421); 9♂, Arba Minch (no. 44); 5♂1♀, Arba Minch (no. 46); 6♀, Arba Minch (no. 23; BC ZSM Lep 78497, 81860); 1♂, Arba Minch (no. 100; BC ZSM Lep 84765); 1♂1♀, Mago NP (no. 96; gen.prp. ZSM G 15903).

Redescription. Adult (Fig. 1). Wingspan. Male and female 16–23 mm. Ground colour leaf green, irrorated with white strigulae. Forewings with a small spot, at ½ of the inner margin, white in the proximal half and brownish in the distal half. On fore- and hindwing, discal dot developed as elongate diffuse dark green streak towards costa, terminal dots absent. Hindwing termen round. Length of male palpi 1.0 times diameter of eye, tip pale brown. In female twice length of diameter of eye. Frons brown. Antennae bipectinate in male, filiform in female. Antennal branches pale ochre, at base slightly darker. Male frenulum present. Male hindtibia with white pencil and four spurs.

Male genitalia (Fig. 43). Comparatively small. Valva narrow, ventral margin convex at base and subapically, concave between. Aedeagus (1.4–1.6 mm) narrow, length of basal stalk approx. 2/5 of aedeagus, with sclerotized lateral process at centre (“coecum”). Sternum A8 with stout, sharp, paired projections.

Female genitalia (Fig. 80). Ductus bursae as long as corpus bursae, the former narrow, the latter elongate oval, both membranous and without any sclerotization. Lamella antevaginalis with slight transverse sclerotization.

Genetic data. BIN: BOLD:AAD7153. Nearest neighbour in Ethiopia: *P. stefani* sp. n. (6.3%). One barcoded Ethiopian specimen, BC ZSM Lep 78492, belonging to a separate BIN cluster (BOLD:AAE9969) at a distance of 4.4%, with further representants from Kenya and Tanzania, but ♂ and female genitalia without apparent differential characters from *P. immaculata thiaucourti*. Requiring further study and more material.

Remarks. South African populations (*immaculata*, *scissaria*, *unipuncta*) show longer processes of sternum A8 and longer aedeagus (1.7–1.8 mm). Delimitation of subspecies requiring further study.

Prasinocyma pedicata Fletcher, 1956

(Figs 2, 44, 81)

Prasinocyma pedicata Fletcher (1956): 31. Locus typicus: Ivory Coast, Bingerville (Holotype ♂ NHM, examined)

Prasinocyma pedicata aethiopica subsp. n.

Holotype. ♂, S. Ethiopia, Sidamo, 16 km, SW Kibre Mengist, 1700m, 5.8107°N 38.8880°E, 25–26.III.2009, leg. R. Beck, M. Dietl; BC ZSM Lep 45465; gen.prp. G 19399.

Paratypes. Oromia: 3♀, S. Ethiopia, Sidamo, 16 km, SW Kibre Mengist, 1700m, 5.8107°N 38.8880°E, 25–26.III.2009, leg. R. Beck, M. Dietl (BC ZSM Lep 45463, 45464, 45465); 2♂, Ethiopia, Oromia, [Sidama], 7 km S Kibremengist, 1500m, 21.IV.2009, 5°48′46″N, 38°57′41″E, S. Naumann, H. Schnitzler; 1♂2♀, S. Ethiopia, Oromia, 13 km S Agere Maryam, 1960m (lux), 5.5149°N, 38.2529°E, 7.XI.2010, leg. de Freina, Hacker, Peks, Schreier (gen.prp. ZSM G 19636); 3♂2♀, Ethiopia, Bale mountains, Harennia Forest 1600m (lux) 21.II.2010, leg. F. Parisi. A. Sciarretta, coll. DAEF (gen.prp. DAEF GG); 9♂1♀, Ethiopia, Bale mountains, Harennia Forest 1800m (lux) 22.II.2010, leg. F. Parisi. A. Sciarretta, coll. DAEF (gen.prp. DAEF GI); 1♀, Ethiopia, Bale mountains, Harennia Forest Karcha Camp 2350m (lux) 20.II.2010, leg. F. Parisi, A. Sciarretta, coll. DAEF (gen.prp. DAEF GL); 3♂, Ethiopia, Bale mountains, Harennia Forest 1600m (lux) 27.IX.2009, leg. Palladino, Parisi, Sciarretta, coll. DAEF (gen.prp. DAEF GH, GM); 3♂, Äthiopien [Ethiopia], Reg. Sidamo/Oromia, Prov. Bale, Goba, Sof Omar, 1570m, 06°55.620′N, 40°43.004′O, 27.V.2012, Dietl M. + S. & R. Beck. **Southern Nations:** 1♂, Ethiopia, “Prov. Oromia” [Southern Nations], btw. Leku and Wendo, env. Abosto, 1790m, N06°44,950; E38°26,612, 15–19.VI.2010, leg. H. Sulak (gen.prp. ZSM G 19641); 1♂, W-Ethiopia, Kaffa, 11 km nw Jima, 10–15.V.2008, 2060m, leg. R. Beck, G. Riedel (BC ZSM Lep 14828); 3♀, Äthiopien [Ethiopia], Ostafrikanisches South Nation, Wushwush 7,4 km w, 1910m, 07°18′.16.05″N [07.304 N 36.057 E], 7.V.2013, Beck R. & R. Wanninger leg (BC ZSM Lep 78486); 3♀, Äthiopien [Ethiopia], Ostafrikanischer Graben, Provinz South Nations, Wushwush 16 km W Bonga, 1910m, 07°18.184 N 36.03.520 E, 21.VI.2014, Riedel, G. & Beck R. (gen.prp. ZSM G 16002); 3♂4♀, Äthiopien [Ethiopia], Ostafrikanischer Graben [East African Rift valley], Mago Nationalpark, 1217m, 06°47.365′ N, 36°27.475′O, 2.VII.2014, Beck, R. & G. Riedel (gen.prp. ZSM G 16065).

Description. Adult (Fig. 2). Wingspan. Male and female 21–27 mm. Ground colour bluish green, irrorated with white strigulae, without spot at the inner termen. Discal dots absent from forewing. On hindwing discal dot developed as an elongate dark green streak towards costa of hindwing. Terminal dots absent from fore- and hindwings. Hindwing termen usually slightly angled at M3. Length of male palpi 1.2 times diameter of eye, tip and upperside brown, underside white. Female palpi very long, 2–2.5 times diameter of eye. Frons brown. Antennae bipectinate in male, filiform in female. Male frenulum very weak. Male hindtibia with white pencil and four spurs.

Male genitalia (Fig. 44). Comparatively small. Valva narrow, ventral membranous lobe prominent, harpe narrow, pointed, short. Aedeagus very narrow, bent at 1/2, length 1.7–1.8 mm. Sternum A8 with paired, narrow, straight, long lateral projections.

Female genitalia (Fig. 81). Lamella antevaginalis bilobous posteriorly, corpus bursae small, sub-globular.

Differential diagnosis. Very similar to nominate subspecies in habitus and genitalia, but differing in ventral membranous lobe of valva at 1/2, in specimens from western Africa at 3/4. Projections of sternum A8 slightly shorter and stouter in the new subspecies. For differences from *P. pseudopedicata* see following species.

Genetic data. BIN: BOLD:AAF8220. Intraspecific genetic variation elevated (maximum pairwise distance 1.7%), distance between nominate subspecies (Sao Tome, Cameroon) and subsp. *aethiopica* 0.8%. Nearest neighbour: *P. pseudopedicata* (1.6%).

Etymology. The name refers to the type locality in Ethiopia.

***Prasinocyma angolica* Prout, 1930**

(Figs 3, 45)

Prasinocyma angolica Prout (1930): 22. Locus typicus: Angola, Bihi (Syntypes 5♂ NHM, examined).

***Prasinocyma angolica pseudopedicata* subsp. n.**

Holotype. ♂, S. Ethiopia, Oromia, 7 km NW Yabelo, 1950m (lux), 4.9252°N, 38.0435°E, 9.XI.2010, leg. de Freina, Hacker, Peks, Schreier; gen.prp. ZSM G 19635; BC ZSM Lep 84181.

Paratypes. **Oromia:** 2♂, id. (gen.prp. ZSM G 19645, 19585); 2♂, S. Ethiopia, Oromia, 1 km W vill. Aluweya, 1300 m (lux), 4.9636°N, 37.5489°E, 10.XI.2010, leg. de Freina, Hacker, Peks, Schreier (BC ZSM Lep 84180; 84185); 1♂, Äthiopien [Ethiopia], Reg. Sidamo/Oromia, Prov. Bale, Goba, Sof Omar, 1570m, 06°55.620'N, 40°43.004'O, 27.V.2012, Dietl M. + S. & R. Beck (BC ZSM Lep 81867; gen.prp. ZSM G 19656); 1♂, S. Ethiopia, Arba Minch, Reg. Omo, Prov. Gemu Gofa, 1350–1450m 6°00.196'N 037°33.043'E, 27.V–04.VI.1999, leg. Beck/Hiermeier (BC ZSM Lep 13156 failure; 85804; gen.prp. ZSM G 19422); **Southern Nations:** 1♂, Äthiopien, Prov. South Nation, Bonga-Hotel, 1720 m, 07°16.444' N, 36°14.769' O, 24.VI.2014, Riedel G. & Beck R. leg. (gen.prp. ZSM G 15907).

Further material from Kenya and Tanzania (see under genetic data).

Description. Adult (Fig. 3). Wingspan. Male 24–26 mm. Ground colour bluish green, irrorated with white strigulae, without spot at the inner termen. Discal dots absent from forewing. On hindwing discal spot developed as an elongate dark green streak towards costa of hindwing. Terminal dots absent from fore- and hindwings. Hindwing termen round. Length of male palpi 1.0 times diameter of eye, tip pale brown. Frons pale brown. Antennae bipectinate in male. Male frenulum very weak. Male hindtibia extended and covering first tarsomere, tibia with white pencil and four spurs.

Male genitalia (Fig. 45). Valva comparatively narrow, ventral membranous lobe prominent, harpe long, narrow, sigmoid. Saccus long and broad. Aedeagus long (2.0 mm) and very narrow, bent at 1/2. Sternum A8 with paired strongly sclerotized, stout, long projections, sub-laterally.

Differential diagnosis. In habitus very similar to *P. pedicata*, but hindwing termen more rounded. In male genitalia reminiscent of *P. pedicata* but projections of sternum A8 closer to each other, longer, harpe longer, aedeagus longer. In habitus and genitalia also reminiscent of *P. bailei*.

Genetic data. BIN: BOLD:AAF8220. Nearest neighbour: *P. pedicata* (populations from Ethiopia) at a distance of 1.6%. Populations of *P. a. pseudopedicata* **subsp. n.** from Kenya and Tanzania with separate BIN (BOLD:AAM9716) at a genetic distance of 3.5% from Ethiopian populations but without any difference in genitalia, and thus regarded as conspecific here. The genetic distance may be explained by past genetic introgression (many 1000 ya) from *P. pedicata* into the Ethiopian populations of *P. a. pseudopedicata* **subsp. n.** and subsequent gene drift away from the typical COI haplotype of *P. pedicata*. Distance from *P. bongaensis* 3.9%.

Etymology. The name refers to the sister species *P. pedicata*, greek pseudo = reminiscent of.

***Prasinocyma bongaensis* sp. n.**

(Figs 4, 82)

Holotype. ♀, Äthiopien [Ethiopia, Southern Nations], Ostafrikanischer Graben, Provinz South Nations, Bonga,

12km E, 2414m, 07°17.652 N 36.22.567 E, 23.VI.2014, Beck, R. & G. Riedel (BC ZSM Lep 84753; gen.prp. ZSM G 15909).

Paratypes. 3♀, id.

Description. Adult (Fig. 4). Wingspan. Female 28–31 mm. Ground colour bluish green, irrorated with white strigulae, without spot at the inner termen. Discal dots absent from forewing. On hindwing discal spot developed as a small, elongate, oblique dark green streak. Terminal dots absent from fore- and hindwings, but a fine, dark green terminal line present. Hindwing termen slightly undulate, slightly angled at M3. Length of female palpi 2.0–2.5 times diameter of eye, tip and upper side red brown. Frons red brown. Female antennae simple, filiform, in the proximal third with small intersegmental incisions.

Female genitalia (Fig. 82). Lamella postvaginalis strongly sclerotized, rectangular. Lamella antevaginalis trapezoid, concave anteriorly. Ductus bursae long and narrow. Corpus bursae elongate pyriform. Signum absent.

Differential diagnosis. In habitus very similar to *P. pedicata*, larger but hindwing termen more undulate and slightly angled. In female genitalia with long and narrow ductus bursae reminiscent of *P. baumgaertneri* **sp. n.** but sterigma less extended and antrum broader. The genetically closest species, *P. tranquilla*, is much smaller and furthermore differs clearly in the missing strigulae, in the narrower forewing shape, in the paler, bluish ground colour, and in the broad ductus bursae of female genitalia.

Genetic data. BIN: BOLD:ACN8258. Nearest neighbours in Ethiopia: *P. tranquilla* (4.6%), *P. baumgaertneri* **sp. n.** (5.5%), *P. pedicata aethiopica* **subsp. n.** (5.6%), *P. hailei* (6.4%).

Etymology. The name refers to the type locality near Bonga.

***Prasinocyma pumilata* Fletcher, 1956**

(Figs 5, 46, 83)

Prasinocyma pumilata Fletcher (1956): 31. Locus typicus: Kenya: Voi (Holotype ♂ NHM, examined).

Material. Oromia: 1♀, Deritu-Dubuluk (locality no. 37; BC ZSM Lep 47449; gen.prp. ZSM G 19453); 13♂6♀, Sidama (no. 52; BC ZSM Lep 78500); 5♂, Bale (no. 53; BC ZSM Lep 78498); 3♂1♀, Sidama (no. 54; BC ZSM Lep 78499; gen.prp. ZSM G 19660); 4♂5♀, Bale (no. 55; BC ZSM Lep 81868, 81869); 1♂4♀, Sidama (no. 22; BC ZSM Lep 78494); 4♂2♀, Sidama (no. 56; gen.prp. ZSM G 19658); **Southern Nations:** 3♂1♀, Leku-Wendo (no. 15; male abdomen brushed).

Redescription. Adult (Fig. 5). Wingspan. Male and female 15–21mm. Ground colour pale leaf green, irrorated with white strigulae, without spot at the inner termen. Small dark green discal dots on fore- and hindwing, easily fading in worn specimens. Terminal dots absent from fore- and hindwings. Hindwing termen round. Length of male palpi 0.9–1.0 times diameter of eye, in female 1.1–1.3 times, tip pale brown. Frons pale brown. Antennae bipectinate in male, antennal branches dark brown at base, pale ochre terminally. Antennae filiform in female. Male frenulum well developed. Male hindtibia with four spurs, without pencil.

Male genitalia (Fig. 46). Valva narrow, harpe absent. Aedeagus bent with sclerotized base of ductus seminalis laterally. Sternum A8 trapezoidal, with shallow, crown-shaped sclerotization.

Female genitalia (Fig. 83). Ductus bursae short, corpus bursae globular, with bipartite sclerite.

Differential diagnosis. Reminiscent of *P. immaculata*, the latter larger on average, darker green. In male genitalia very similar to those of *P. immaculata*, but the latter with stout, sharp, paired projections on sternum A8.

Genetic data. BIN: BOLD:AAY5231. Intraspecific variation low. Nearest neighbour in Ethiopia: *P. tranquilla* **sp. n.** (3.1%).

***Prasinocyma tranquilla* Prout, 1917**

(Figs 6, 47, 84)

Prasinocyma tranquilla Prout (1917): 428. Locus typicus: Ethiopia, Diredaau, NW of Harar (Syntypes ♂♀ NHM, examined)

Material. Oromia: 5♂, Sidama (locality no. 52; BC ZSM Lep 78502 (failure), 78503, 85805; gen.prp. ZSM G 19642, 19662); 1♀, Ethiopia, Gamu Gofa, nr Arba Minch, 1400m, 6°15'N 37°30'E, 4.V.2008, S. Naumann, H. Schnitzler (BC ZSM Lep 81476).

Redescription. Adult (Fig. 6). Wingspan. Male 18–22 mm, female 23 mm. Ground colour pale aquamarine green, hindwings slightly paler, strigulae missing. Costa of forewing red, without spot at the inner termen. Discal and terminal dots absent from fore- and hindwings. Hindwing termen round. Palpi short, in male 0.8 times diameter of eye, in female 1.2 times, pale brown, tip slightly paler. Frons pale brown. Antennae bipectinate in male, antennal branches pale ochre, black at the basis. Antennae of female filiform male frenulum present but weak. Male hindtibia with four spurs, without pencil.

Male genitalia (Fig. 47). Uncus narrow, comparatively short, saccus large, broad and rounded. Valva elongate, with ventral margin basally sclerotized and slightly curved subterminally. Aedeagus large (length 2.3 mm), stoutly sclerotized, strongly curved, stalk very short, terminally tapering. Sternum A8 with sclerotized bilobous projection, sometimes crown-shaped, with a small notch between, reminiscent of equivalent in *P. pumilata*.

Female genitalia (Fig. 84). Lamella antevaginalis rhomboid. Ductus bursae short, broad, strongly sclerotized, posteriorly dilated to a reniform antrum. Corpus bursae elongate oval. Signum absent.

Genetic data. BIN: BOLD:ACK5720. Nearest neighbours in Ethiopia: *P. pumilata* (3.1%), *P. oblita* (4.6%).

Remarks. *P. tranquilla* was collected at the Yabello Motel (Sidama) together with its sister species *P. pumilata* in the same night. According to Prout (1930) a "small species, reminiscent of *Syndromodes*, fringe green". Male genitalia (shape of aedeagus and valva) suggesting relations to the *immaculata* species-group as also suggested by its position in the order of species as listed by Prout (1930). In habitus reminiscent of *P. pumilata*, but larger, coloration more uniform, almost without irroration of white scales, discal dots absent. Male genitalia much larger, aedeagus longer, sternum A8 with posterior lobes broad, smooth, rectangularly bordered.

***Prasinocyma getachewi* sp. n.**

(Figs 7, 48)

Holotype. 1♂, S. Ethiopia [Southern Nations], Arba Minch, 16–26.IX.2000, leg. R. Beck (BC ZSM Lep 13169; gen.prp. ZSM G 19398).

Description. Adult (Fig. 7). Wingspan. Male 22 mm. Ground colour green, slightly irrorated with white strigulae; with conspicuous white spot at ½ of the inner margin. On fore- and hindwings, discal dots developed as elongate dark green streaks towards costa. Terminal dots absent from fore- and hindwings. Hindwing termen rounded. Length of male palpi 1.2 times diameter of eye, tip pale brown. Male antennae bipectinate with pale ochre branches. Male frenulum very weak. Male hindtibia with weak pencil and four spurs.

Male genitalia (Fig. 48). Uncus short, broad, bill-shaped. Socci setose, flat, but extended. Gnathos and tegumen subdivided to four sclerites. Saccus narrowly projecting. Valva comparatively long and narrow, with basal elongate triangular process, membranous ventral lobe of valva very small. Aedeagus long (1.65 mm), straight and very narrow, with a single elongate cornutus. Sternum A8 not sclerotized, without modifications at posterior margin.

Differential diagnosis. In several details of male genitalia (shape of valve, uncus, gnathos and aedeagus) reminiscent of *P. simiaria* (Guenée, 1858) from Senegal, but differing in the broader uncus, different shape of tegumen, longer projection of sacchus, unmodified sternum A8 and the conspicuous white spot of the inner margin of forewing. Basal projection of valva perhaps homologous to equivalents in *P. pumilata* and *P. immaculata*.

Genetic data. No BIN assigned in Ethiopia (short sequence), but BOLD:ABY5085 with specimens from Ghana and Sierra Leone apparently refers to this species. Nearest neighbour in Ethiopia: *P. baumgaertneri* sp. n. (1.7%).

Etymology. The name refers to Dr. Getachew Tikubet, Addis Ababa, supporting the research projects of the University of Molise in Ethiopia.

***Prasinocyma baumgaertneri* sp. n.**

(Figs 8, 49, 85)

Holotype. ♂, C. Ethiopia, Oromia, southern Bale Mts, Harena Forest, 2385m, 6.7139°N, 39.7268°E, 28.XII.2013–10.I.14, D. Wiersbowski; BC ZSM Lep 81479, gen.prp. ZSM G 19528.

Paratypes. Oromia: 1♂, id. (locality no. 80); 1♂, Ethiopia, Bale mountains, Harennä Forest 1600m (lux) 21.II.2010, leg. F. Parisi. A. Sciarretta, coll. DAEF (DAEF gen.prp. GO); 1♂, Ethiopia, Bale mountains, Harennä Forest 1600m (lux) 27.IX.2009, leg. Palladino, Parisi, Sciarretta, coll. DAEF; 1♂, Ethiopia, Bale mountains, Harennä Forest 1800m (lux) 22.II.2010, leg. F. Parisi. A. Sciarretta (BC ZSM Lep 81816, DAEF gen.prp. GP); 1♂, C. Ethiopia, Oromia, Southern Bale Mts, Harennä Forest, Katcha clearing, 1810m, 6.6167°N–39.7782°E, 21.II.–7.III.2014, D. Wiersbowski (gen.prp. ZSM G 19654); 1♀, C. Ethiopia, Oromia, southern Bale Mts, Harennä Forest, 1825m, 06°37.101' N, 39°46.422' E, 16.–25.XI.2014, D. Wiersbowski.—**Southern Nations:** 1♂6♀, Äthiopien [Ethiopia], Ostafrikanischer Graben [East African Rift Valley], South Nation, Bonga, 16 km E, 2440m, 07°11' N 36°28' E, 04.V.2013, Beck R. & R. Wanninger leg (BC ZSM Lep 81862); 1♂, Ethiopia, Kaffa, 27 km to Bonga, 1900m, 7°18'N36°10'E, 1.V.2008, leg. S. Naumann, Schnitzler (gen.prp. ZSM G 19637); 2♀, S. Ethiopia, Oromia, 13 km S Agere Maryam, 1960m (lux), 5.5149°N, 38.2529°E, 7.XI.2010, leg. de Freina, Hacker, Peks, Schreier (BC ZSM Lep 84177 and 84178).

Description. Adult (Fig. 8). Wingspan. Male and female 25–34 mm. Ground colour bluish green, slightly irrorated with white strigulae. Forewings with white spot at ½ of the inner margin. Discal dots of hindwing developed as an elongate dark green streak towards costa, discal dots absent from forewings. Terminal dots absent from all wings. Hindwing termen usually slightly angled at M3. Length of male palpi 1.5 times diameter of eye, tip and upperside brown, underside white. In female 2.0–2.5 times length of diameter of eye. Frons deep green. Antennae bipectinate in male, filiform in female. Antennal branches pale ochre. Male frenulum present, weak. Male hindtibia with four spurs, with large projection at tip, covering half of first tarsomere.

Male genitalia (Fig. 49). Uncus broad, tegumen extended to two plates. Valva with two spinulose crests and with basal elongate triangular process. Aedeagus very narrow and linear, length 1.65–1.85 mm. Sternum A8 sclerotized, with two shallow lobes, often irregularly shaped.

Female genitalia (Fig. 85). Sterigma extended as a bipartite, alate sclerite. Lamella antevaginalis developed as a diffuse, irregularly shaped membrane. Ductus bursae long and narrow, posteriorly sclerotized. Corpus bursae large, oval. Signum absent.

Differential diagnosis. In male genitalia the two spinose crests on the valve distinguished from all other *Prasinocyma* species by the two spinose crests on the valve. The broad uncus and basal elongate triangular process reminiscent of the equivalents in the preceding species (*P. getachewi* sp. n.) and *P. simiaria*, but clearly differing from both in the spinose crests on the valva, differing from *P. simiaria* also by the white spot at ½ of the inner margin of forewing. Basal projection of valva perhaps homologous to equivalents in *P. pumilata* and *P. immaculata*.

Genetic data. BIN: BOLD:ACL7685. Intraspecific variation low: 0.15% (n=3). Nearest neighbour in Ethiopia: *P. getachewi* sp. n. (1.7%), the latter being represented by a short sequence only, so far. Distance from *P. bongagensis* 3.6%.

Etymology. The name refers to Prof. Johann Baumgärtner, Molinis (Switzerland), who worked for many years in Ethiopia, and shared entomological research with one of the authors.

***Prasinocyma oblita* Prout, 1930**

(Figs 9, 50)

Prasinocyma oblita Prout (1930): 23. Locus typicus: Ivory Coast: Bingerville (Syntypes 1♂4♀, NHM, examined).

Material. Southern Nations: 1♂, Wushwush (locality no. 94; BC ZSM Lep 84756; gen.prp. ZSM G 16001).

Redescription. Adult (Fig. 9). Wingspan. Male 29 mm. Ground colour comparatively dark green, irrorated by pale strigulae. Forewing of the Ethiopian male with a very small whitish dot at the inner termen (absent from the types from the Ivory Coast). Discal and terminal dots absent from fore- and hindwings, but hindwing with elongate, oblique, diffusely dark green streak in the discal cell. Hindwing termen very slightly angled at M3 (more rounded in the type series). Length of male palpi 1.1 times diameter of eye, upperside and tip red brown, underside white. Frons comparatively dark brown. Antennae bipectinate in male, antennal branches ochre, with red tinge. Male frenulum present but weak.

Male genitalia (Fig. 50). Uncus narrow, stout. Socii developed as triangular, setose patches. Valva simple, with

subapical ventral lobe at $\frac{1}{2}$ ventral margin of valva. Saccus membranous, furrowed. Saccus very long and slender. Aedeagus extremely narrow and long (length 2.8 mm). Sternum A8 narrower at centre, posteriorly with paired, curved, long and narrow projections.

Differential diagnosis. Differing from all other *Prasinocyma* species in the extremely long male aedeagus. Prout (1930) states this species to be "near *gemmatimargo*, but larger, irroration less developed, female palpi longer, fringe dots lacking". Comparison of the type specimens of *P. gemmatimargo* Prout, 1915 and *P. oblita* does not reveal any similarity, the white terminal dots are absent from the latter.

Genetic data. BIN: BOLD:ACS6184. Nearest neighbours in Ethiopia: *P. baumgaertneri* sp. n. (3.6%), *P. angolica pseudopedicata* subsp. n. (3.9%).

Remarks. In Prout (1930) *P. oblita* is generally mentioned for "Abyssinia". The genitalia of a male syntype of *P. oblita* in the NHM are exactly matching those of our Fig. 50, but the conspecificity of all five syntypes from the Ivory coast still needs to be examined. The female genitalia of an examined female syntype are somewhat reminiscent of those of *P. baumgaertneri* sp. n. If the syntype series reveals to involve different species, we recommend to choose the male as lectotype, as it offers clear differential features in genitalia.

Prasinocyma hailei Debauche, 1937

(Figs 10, 51, 86)

Prasinocyma hailei Debauche (1937): 323. Locus typicus: Ethiopia, Addis Ababa, 'over 8000 ft' (Holotype ♂ NHM, examined).

Material. **Addis Ababa:** 2♂1♀, Addis Ababa (locality no. 41); BC ZSM Lep 83225, 83226, 85811, 85812; gen.prp.19592, 19593). **Oromia:** 1♀, Finchawa (no. 61; BC ZSM Lep 84186); 1♀, Bale (no. 57; BC ZSM Lep 84187); West Shoa (no. 29, BC ZSM Lep 09781; gen.prp. ZSM G 19394).

Redescription. Adult (Fig. 10). Wingspan. Male and female 20–22 mm. Ground colour leaf green, strongly irrorated with white strigulae. Forewing without dot at $\frac{1}{2}$ of the inner margin. Conspicuous dark green discal dots on all wings, terminal dots absent. Hindwing termen rounded at M3. Length of male palpi 0.8–1.0 times diameter of eye, tip and upperside reddish, underside white. Length of female palpi 1.3 times diameter of eye. Frons red. Antennae bipectinate in male, filiform in female. Antennal branches ochre, markedly darker at base. Male frenulum present. Male legs reddish dorsally; hindtibia with four spurs, without pencil.

Male genitalia (Fig. 51). Valva with small subapical ventral lobe, harpe sclerotized, stout, curved towards the ventral margin of valva, broad and rounded at tip. Aedeagus bent twice at centre, long and narrow, with basal stalk approx. $\frac{2}{5}$ of the total length. Sternum A8 with two sub-truncate projections, sclerotized and concave between.

Female genitalia (Fig. 86). Antrum sclerotized, broad, posteriorly bilobous. Lamella antevaginalis narrow, transverse, alate, anteriorly bilobous. Ductus bursae short, corpus bursae very small, membranous.

Differential diagnosis. In habitus and male genitalia reminiscent of *P. angolica* but the latter with a narrower harpe and long posterior processes on sternum A8.

Genetic data. BIN: BOLD:AAF8134. Nearest neighbour in Ethiopia: *P. oblita* (6.4%). Genetically well nested within the *immaculata* species-group. The specimen from West Shoa shows a genetic divergence of 1.4% from the populations of Addis Ababa and Bale, perhaps due to isolated populations with disruptive feature patterns and thus referring to a (sub)specific subdivision. Further research with more material is required.

Prasinocyma perpulverata Prout, 1916

Prasinocyma perpulverata Prout (1916): 143. Locus typicus: Somalia, Mandera (Holotype ♂ NHM, examined).

Material. In NHM there is a long series from Ethiopia, 'Dire Daoua', mentioned also in Prout (1930).

Redescription (*P. perpulverata*). Adult small, wingspan in male 14–17 mm, in female 16–18 mm. Forewing narrow, hindwing termen rounded. Ground colour pale ochre, irrorated with dark brown scales, mainly on forewing. Male usually with much stronger forewing irroration, sometimes with very dark medial area, reminiscent of the coloration of *P. loveridgei* (Prout, 1926), cf. Fig. 11. Dark brown discal spot conspicuous, elongate on all

wings, on forewing often blackish and not rarely curved. Length of male and female (!) palpi 0.9–1.1 times diameter of eye, pale ochre. Frons pale ochre, with some dark brown scales. Antennae bipectinate in male, filiform in female. Antennal branches ochre, markedly darker at base. Male frenulum present. Male hindtibia with four spurs, with pencil and with terminal process covering first tarsomere. Male and female genitalia not studied from *P. perpulverata*, but probably very close to those of *P. loveridgei* (cf. Figs 52, 88). Male genitalia of *P. loveridgei* (Fig. 52). Uncus short. Socii developed as short setose patches. Gnathos weakly sclerotized. Valva narrow, subapical ventral lobe at rather central position. Harpe short and broad. Aedeagus bent twice at centre, with sclerotized edge at 2/3, length 1.25 mm. Sternum A8 with two sub-truncate projections, sclerotized and concave between. In male genitalia reminiscent of those of *P. hailei*, mainly in the shape of aedeagus and sternum A8.

Female genitalia (Fig. 87) Sterigma with two tapering posterior projections. Ductus bursae short, corpus bursae very small, membranous.

Remarks. Closely related to *P. loveridgei* (Prout, 1926) described from Tanzania and examined from a series from Kenya (ZSM). *P. loveridgei* may reveal to need to be downgraded to a subspecies of *P. perpulverata*, some Ethiopian specimens from the NHM series ('*P. perpulverata*') are indistinguishable from our Kenyan *P. loveridgei* in habitus.

Genetic data. Not yet barcoded.

The *nereis* species-group

Eighteen species in Ethiopia, one of them remaining undescribed here. The *nereis* species-group includes smaller sub-groups with well defined synapomorphies. Interestingly, *P. nereis* and *P. shoa* are identic when excluding 3rd codon position of COI. *P. leveneorum* **sp. n.** and *P. aquamarina* **sp. n.** are closely related sibling species. The *nereis* species-group as a total is genetically less supported than the *immaculata* species-group in different alignments and algorithms, e.g. the undescribed species falls within the *nereis* species-group only when excluding 3rd codon position. In male genitalia the members of this group are somewhat heterogenous: Socii are usually present but vestigial and developed as small setose patches, the sacculus is usually sclerotized, curved at tip and spinose, the aedeagus often with lateral sclerotization, sternum A8 often with two projections or bilobous.

Prasinocyma nereis Townsend, 1952 (comb.n.)

(Figs 12, 53)

Prasinocyma nereis Townsend (1952): 68. Locus typicus: Kenya: Nakura (Holotype ♂ NHM, examined). In Scoble (1999) combined with genus name *Eretmopus*. Neither genitalia nor COI data suggest or justify a placement outside *Prasinocyma*, therefore combined with *Prasinocyma* here (comb.n.).

Material. Amhara: 1♂, Lake Tana (no. 82; BC ZSM Lep 83221, gen.prp. ZSM G 19588); **Oromia:** 1♂, West Shoa (locality no. 28; BC ZSM Lep 10016; gen.prp. ZSM G 19402).

Redescription. Adult (Fig. 12). Wingspan. Male 28–32 mm. Ground colour pale bluish green, irrorated with white strigulae. Forewing without spot at the inner termen, with minute, black discal dot. Terminal dots of fore- and hindwings absent. Hindwing termen rounded. Length of male palpi 1.2 times diameter of eye, tip and upperside reddish, underside white. Frons reddish. Antennae long, bipectinate in male. Antennal branches pale ochre. Male frenulum present. Male hindtibia with white pencil and four spurs, with large projection at tip, covering half of first tarsomere.

Male genitalia (Fig. 53). Uncus dilated at centre. Socii vestigial, reduced to two small setose bulbs. Gnathos strongly sclerotized, pointed and spinulose at the inner margin. Valva large, distally sub-rectangular, sub-apical lobe large. Sacculus sclerotized, at tip rectangularly bent toward costa to a large, strongly spinose harpe. Aedeagus (length 2.5 mm) with a single, long cornutus curved at its base, at the origin of the ductus seminalis a round sclerite with dentate margin. Sternum A8 with two sclerotized lobes, spinulose at posterior margin and deeply notched between.

Genetic data. BIN: BOLD:AAY3216. Nearest neighbours: *P. shoa* (3.0%) and *P. croca* (3.7%). *P. shoa* and *P. nereis* have COI sequences when excluding the 3rd, highly variable, codon position.

Remarks. New for the fauna of Ethiopia.

Prasinocyma shoa Herbulot, 1993

(Figs 13, 54)

Prasinocyma shoa Herbulot (1993): 50. Locus typicus: Ethiopia (Choa, = Shewa/Shoa), Debre Zeit, 1800 m (Holotype ♂ ZSM, examined and barcoded: BC ZSM Lep 69701 (658bp), BC ZSM Lep 76115 (164bp); gen.prp. ZSM G 19503 taken from paratype from type locality; all four paratypes at the ZSM are males with brushed tip of abdomen).

Material. The type series (n=5) from Debre Zeit (northern prov. Oromia) was examined at the ZSM.

Redescription. Adult (Fig. 13). Wingspan. Male 24–30 mm. Ground colour leaf green, irrorated with white strigulae. Forewing without spot at the inner termen. On fore- and hindwing, terminal and discal dots absent. Hindwing termen round. Length of male palpi 1.0–1.2 times diameter of eye, tip and upperside reddish or darker ochre, underside white. Frons reddish. Antennae bipectinate in male. Antennal branches pale ochre. Male frenulum developed, weak. Male hindtibia with four spurs, without pencil.

Male genitalia (Fig. 54). Uncus short. Short socii present. Valva broad, with a large subapical ventral membranous lobe. Sacculus sclerotized, towards tip curved, terminally round and spinulose. Dorsobasal margin of sacculus with stout thorny process. Aedeagus with a very narrow proximal stalk, length 2.1 mm, without cornuti, vesica weakly granulated. Sternum A8 with two poorly sclerotized prominent lobes and deep invagination between.

Genetic data. BIN: BOLD:ACL5616. Nearest neighbour: *P. nereis* (3.0%; identic when excluding 3rd position). At large genetic distance from subspecies *yabellensis* **subsp. n.** (7.9%).

Remarks. In male genitalia reminiscent of *P. nandiensis*, but harpe with a hook at its base.

Prasinocyma shoa yabellensis subsp. n.

(Figs 14, 55, 88)

Holotype. ♂, S. Ethiopia [(southern) Oromia], Sidamo, 13 Km, W Yabello, Motel, 1960m, 4.90°N 38.01°E, 28–30.III.2009, leg. R. Beck, M. Dietl (BC ZSM Lep 45505, gen.prp. ZSM G 19401).

Paratypes. 5♂1♀, S. Ethiopia, Sidamo, 13 Km, W Yabello, Motel, 1960m, 4.90°N 38.01°E, 28–30.III.2009, leg. R. Beck, M. Dietl (BC ZSM Lep 45503, 84639, 85819; gen.prp. ZSM G 19468, 19469).

Description. Adult (Fig. 14). Wingspan. Male and female 24–30 mm. Ground colour leaf green, irrorated with white strigulae. Forewing without spot at the inner termen. On fore- and hindwing, terminal and discal dots absent. Hindwing termen round. Length of male palpi 1.0 times diameter of eye, palpi white, tip reddish brown. In female twice length of diameter of eye. Frons brown with slight reddish tinge. Antennae bipectinate in male, filiform in female. Antennal branches pale ochre. Male frenulum present. Male hindtibia with four spurs, without pencil.

Male genitalia (Fig. 55). Almost without differences from *P. shoa*, see description above, aedeagus slightly shorter (1.8–1.85 mm).

Female genitalia (Fig. 88). Apophyses comparatively long. Lamella postvaginalis sclerotized, rhomboid, bipartite. Lamella antevaginalis slightly sclerotized, bipartite. Antrum sclerotized, dilated, funnel-shaped. Ductus bursae of medium length. Corpus bursae sub-globular. Signum developed as a sclerotized transversal ridge.

Genetic data. BIN: BOLD:AAP7553. At large genetic distance from nominotypical subspecies of *P. shoa* (7.9%; n=2 in both lineages). Genetically identic specimens have been barcoded from Tanzania, province Morogoro. Nearest neighbours: *P. croca* (5.7%) and *P. germinaria* (7.8%).

Etymology. The name refers to the type locality.

Remarks. Without differences from *P. shoa* in habitus and genitalia, nevertheless described at subspecific rank because of the huge genetic distance.

Prasinocyma robusta sp. n.

(Figs 15, 56, 89)

Holotype. ♂, S. Ethiopia, [Oromia] Sidamo, 13 km, w Yabello, Motel, 1960m, 4.90° N 38.01° E, 28–30.III.2009, leg. R. Beck, M. Dietl (BC ZSM Lep 81819 failure; 85817 with 164bp minibarcode; gen.prp. ZSM G 19467).

Paratypes. Oromia: 6♀, id. (BC ZSM Lep 85818); 1♀, S. Ethiopia, Oromia, [Sidama], 7 km NW Yabelo, 1950 m (lux), 4.9252°N, 38.0435°E, 9.XI.2010, leg. de Freina, Hacker, Peks, Schreier. **Southern Nations:** 1♀, Ethiopia, Gamu Gofa, nr Arba Minch, 1400m, 6°15'N 37°30'E, 4.V.2008, S. Naumann, H. Schnitzler.

Description. Adult (Fig. 15). Wingspan. Male 28 mm, female 30–35 mm. Ground colour pale leaf green, slightly irrorated with whitish scales, without spot at the inner termen, fringe whitish, forewing costa whitish. Discal spots and terminal dots absent from fore- and hindwings. Hindwing termen round, angled at tornus. Length of male palpi 0.7 times diameter of eye, palpi whitish with pale brown or pale green tinge, tip darker. Length of female palpi 0.8–1.0 times diameter of eye. Frons pale brown, in fresh specimens sometimes with slight green tinge. Antennae bipectinate in male, branches ochreous. Antennae filiform in female. Male frenulum present. Male hindtibia with four spurs, without pencil.

Male genitalia (Fig. 56). Uncus stout. Socii absent. Gnathos strongly sclerotized. Sacculus slightly sclerotized, shorter than 1/2 of valva. Valva with a forceps-shaped sclerite at base, length of dorsal arm 1/4 length of valva. Aedeagus narrow, length 2.1 mm, with subterminal rounded projection, stalk very short. Sternum A8 membranous, sub-trapezoidal and flat at the distal end, without projections or lobes.

Female genitalia (Fig. 89). Lamella postvaginalis broadly sclerotized, alate. Antrum with curved posterior projections. Ductus bursae broad, membranous. Corpus bursae oval. Signum developed as a small narrow ridge.

Differential diagnosis. In habitus similar to *Prasinocyma acutipennis* Wiltshire, 1994, described from south-western Saudi Arabia (near Taif, al-Shafa, 2000 m; Holotype male NHM, with topotypical material examined and barcoded at the ZSM), but much smaller (wingspan 22–24 mm), discal spots sometimes diffusely marked, frons pale green with 'dark purple patches', in male genitalia the subapical ventral lobe smaller, the dorsal arm of the forceps-shaped sclerite ('harpe') longer than the ventral part, Aedeagus with lateral projection at tip, not subterminally. In habitus also reminiscent of the South African *Paraprasina discolor* Warren, 1897, but the latter with two hindtibial spurs only, female antennae bipectinate, palpi longer, in male genitalia with stout projection ('harpe') at centre of valva etc. (cf. Fig. 100 in Janse 1935), genetic distance 10.6%. In habitus somewhat reminiscent of *P. hailei*, but larger, body more robust, forewings elongate, discal spots absent, fringe whitish, in male genitalia slightly reminiscent of the forceps-shaped condition of the sacculus in *P. amharensis*.

Genetic data. Sequenced to 164bp minibarcodes. Genetic divergence from the Saudi Arabian sister species *P. acutipennis* 6.5%. Nearest neighbour in Ethiopia: *P. amharensis* (4.6%).

Etymology. The name refers to the stout body of this species.

Prasinocyma amharensis sp. n.

(Figs 16, 57, 90)

Holotypus: 1♂, Ethiopia, "Prov. Oromiya" [Amhara], ZW. Debre Sina & Sembo, Umg. Debre Sina, N09°35.0650, E39°44.417, 06.IV.2010, 2730 m—lux, leg. H. Sulak, coll. M. Sommerer; BC ZSM Lep 40510, gen.prp. ZSM G 19458.

Paratypes. Amhara: 1♂ Ethiopia, Debark, Simien Mountains, Sankaber Camp, 13°13'51"N/38°02'25"E, 3250m, Afro-alpine meadow/shrubland, 31-10-2011, leg. H. S. Staude (BC ZSM Lep 83217, gen.prp. ZSM G 19595); **Oromia:** 2♀, Ethiopia, [northern] Oromia Region, sw Shewa Zone, Wenchi Crater Lake [8.781° N 37.891°E], 2900m (lux) 19.IV.2009, leg. A. Sciarretta, G. Spina (BC ZSM Lep 81808; gen.prp. DAEF PU).

Description. Adult (Fig. 16). Wingspan. Male and female 27–35 mm. Ground colour from pale to deep leaf green, slightly irrorated with white strigulae. Forewing without spot at the inner termen., Terminal and discal dots absent from fore- and hindwings. Hindwing termen round. Palpi very short, length in male 0.5 times diameter of eye, in female 1.0 times; tip and upperside brown, underside white. Frons brown. Antennae bipectinate in male, filiform in female. Antennal branches pale ochre. Male frenulum present. Male hindtibia with four spurs, without pencil.

Male genitalia (Fig. 57). Socii vestigial, reduced to small setose lobes. Saccus large, sclerotized, strongly bent. Valva narrow, subapical ventral lobe small. Sacculus sclerotized with a long basal process curved towards the distal end of valva. Aedeagus large (length 2.3 mm), with two sclerotized lateral sclerites in the distal half. Sternum A8 with paired strongly sclerotized, stout, long lateral projections.

Female genitalia (Fig. 90). Sterigma (lamella antevaginalis) sclerotized, large, reniform, at the lateroanterior

edge with a round extension. Lamella postvaginalis sclerotized, with longitudinal furrows, laterally tapering. Ductus bursae of medium length. Corpus bursae oval.

Differential diagnosis. In habitus similar to *P. gajdacs* but differing by evenly rounded hindwing termen (concave between veins in *P. gajdacs*), terminal dots absent; in genitalia reminiscent of *P. tricolorifrons*, the latter, however, with sacculus narrower and curved at tip, sternum A8 bilobous at posterior margin.

Genetic data. BIN: BOLD:AAY3238. Both barcoded specimens BIN-sharing, however not exactly matching their barcodes, at 1.4% distance, also showing slight differences in coloration. Nearest neighbours in Ethiopia: *P. robusta* sp. n. (4.6%), *P. albivenata* (4.7%). Genetically close to the *aethaerea* species-group, but also, to a certain extent, to *P. jefferyi* (distance 7.9% when considering all codons; particularly close when excluding the 3rd codon position), tentatively attributed to the *nereis* species-group here.

Etymology. The name refers to the type locality in Amhara province.

Prasinocyma jefferyi Prout, 1930

(Figs 17, 58, 91)

Prasinocyma jefferyi Prout (1930): 24. Locus typicus: Kenya, Lumbwa (Syntype(s) ♂ NHM, examined).

Material. Amhara: 1♂, Debre Sina (locality no. 59; BC ZSM Lep 40509, gen.prp. ZSM G 19459); 1♀, Debre Sina (no. 60; BC ZSM Lep 81475). **Southern Nations:** 2♂, Arba Minch (no. 44; BC ZSM Lep 81489, gen.prp. ZSM G 19531). **Oromia:** 1♂, Kibre Mengist (no. 47; BC ZSM Lep 84192); 1♂, Bale (no. 64); 2♂, Bale (no. 57; BC ZSM Lep. 84191, gen.prp.19647); 2♂, Bale (no. 93).

Redescription. Adult (Fig. 17). Wingspan. Male and female 29–32 mm. Ground colour deep leaf green, slightly irrorated with white scales, forewing costa with red scales. Forewings with a spot at ½ of the inner margin, white proximally and brownish in the distal half. On fore- and hindwings, a black discal dot and terminal dots present. Hindwing termen angled at M3. Length of male palpi 1.0–1.2 times diameter of eye, tip and upperside brown, underside white. Female palpi 1.5 times of diameter of eye. Frons deep green, sometimes ochre or whitish toward proboscis. Antennae bipectinate in male, filiform in female. Antennal branches pale ochre. Male frenulum present. Male hindtibia with white, weak pencil and four spurs.

Male genitalia (Fig. 58). Uncus short. Socii developed as comparatively large lobed, setose patches. Saccus bent. Valva large with large ventral subapical lobe, sacculus sclerotized with a long basal narrow curved process, and two other long, pointed and spinulose processes, arising from sacculus subterminally and terminally. Aedeagus (length 2.0–2.1 mm) sigmoid, with spinulose sclerotization (“cornutus”). Sternum A8 with two sclerotized subrectangular projections.

Female genitalia (Fig. 91). Sterigma elongate, strongly sclerotized. Antrum funnel-shaped, sclerotized. Corpus bursae small, oval. Signum very slightly sclerotized and inconspicuous, posteriorly with two small spinules.

Genetic data. BIN: BOLD:AAY3239. Intraspecific variation 0.8%. Nearest neighbours in Ethiopia: *P. albivenata* (5.9%) and *P. amharensis* sp. n. (7.9%).

Remarks. Well matching genitalia of the type specimen (examined in NHM).

Prasinocyma monikae sp. n.

(Figs 18, 59)

Holotype. 1♂, S. Ethiopia [southern Oromia], Sidamo, 13 Km, W Yabello, Motel, 1960m, 4.90°N 38.01°E, 28–30.III.2009, leg. R. Beck, M. Dietl (BC ZSM Lep 45504, gen.prp. ZSM G 19404).

Description. Adult (Fig. 18). Wingspan. Male 30 mm. Ground colour leaf green, slightly irrorated with white scales. Forewing without spot at the inner termen. On fore- and hindwings, black discal dot present, terminal dots absent. Hindwing termen very slightly angled at M3. Length of male palpi 1.2 times diameter of eye, tip and upperside pale brownish, underside white. Frons green, pale towards proboscis. Antennae long bipectinate in male, antennal branches pale ochre. Male frenulum well developed. Male hindtibia with large white pencil, four spurs and a terminal process covering half of the first tarsomere.

Male genitalia (Fig. 59). Uncus stout, broad at base. Valva elongate, subapical membranous lobe well developed, ventral part strongly corrugated. Sacculus membranous, at tip rectangularly curved towards costa, ending in a round, strongly spinose sclerite. Aedeagus very broad, slightly curved, length 2.0 mm, with a small terminal lateral tooth. Sternum A8 with paired short triangular projections.

Differential diagnosis. In habitus clearly distinguished from all other species lacking discal dots and/or having spots at the inner forewing margin as well as from all species with clearly angled hindwings, with whitish encircled discal dots and/or with terminal (fringe) dots. In habitus almost indistinguishable from the somewhat larger *P. aquamarina* **sp. n.**, but the large genetic distance (see below) clearly contradicts conspecificity. Ground colour somewhat darker than in *P. tricolorifrons*. Male genitalia unique, not matching any of the types examined in NHM and ZSM.

Genetic data. BIN: BOLD:AAW4692. Nearest neighbours in Ethiopia: *P. leveneorum* **sp. n.** (2.5%), *P. croca* (5.4%) and *P. fusca* **sp. n.** (5.7%). Distance from the similar *P. aquamarina* **sp. n.** 7.6%.

Etymology. The name refers to Mrs. Monika Dietl (now Monika Beck) who collected the holotype.

Prasinocyma corrugata Fletcher, 1958

(Figs 19, 60)

Prasinocyma corrugata Fletcher (1958): 84. Locus typicus: Kenya: Aberdare Range, Mt Kinangop, 8000 ft (Holotype ♂ NHM, examined).

Material. Oromia: 1♂, Bale (locality no. 40; BC ZSM Lep 81812 (failure), 85807; gen.prp. DAEF GO1); 1♂, Bale (locality no. 64; gen.prp. ZSM G 19653).

Redescription. Adult (Fig. 19). Wingspan. Male 34–36 mm. Ground colour bluish green, slightly irrorated with white scales. Forewings with proximally white, distally black spot at ½ of the inner margin. Fore- and hindwings with black, whitish encircled, discal dot, terminal dots absent. Hindwing termen angled at M3. Length of male palpi 1.0–1.2 times diameter of eye, tip and upperside green, underside white. Frons green. Antennae bipectinate in male, antennal branches pale ochre. Male frenulum present. Male hindtibia with white pencil, four spurs and terminal process covering 1/3 of the first tarsomere.

Male genitalia (Fig. 60). Uncus short, dilated at base. Socii developed, narrow, length about 1/3 length of uncus. Saccus round. Valva broad, subapical ventral lobe conspicuous. A sclerotized spinose process (harpe) arising from central part of valve basis, directed toward apex. Sacculus narrow, membranous at base, sclerotized towards tip. Aedeagus long (2.5 mm), with a stout, long, curved cornutus and another shorter one, vesica with a bundle of microspinules. Sternum A8 with two tapering projections, deeply concave between.

Genetic data. From Ethiopia, so far, only sequenced to a 164bp short fragment (BC ZSM Lep 85807). Nearest neighbour in Ethiopia: *P. septentrionalis* **sp. n.** (4.4%). The short fragment of Ethiopian *P. corrugata* is genetically identical with that of the holotype of *P. permagna* Herbulot, 1982 from Cameroon. This result needs to be further analyzed with full fragments. Genitalia of both species are clearly different, however.

Remarks. Well matching genitalia of the holotype specimen in NHM, but in the holotype the projections on sternum A8 are shorter. Strongly differing from *P. fusca* **sp. n.** in male genitalia, see there. The spinose process arising from the centrobasal part of valva possibly homologous to the equivalent in *P. beryllaria* **sp. n.**

Prasinocyma fusca **sp. n.**

(Figs 20, 61, 92)

Holotype. ♂, Ethiopia [Oromia], Bale mountains, Haremma Forest 1600m (lux) 21.II.2010, leg. F. Parisi, A. Sciarretta, coll. ZSM (BC ZSM Lep 81820; gen.prp. DAEF GM1).

Paratypes. Oromia: 2♂1♀, id., coll. DAEF (gen.prp. DAEF GN1); 1♂, Ethiopia, Bale mountains, Haremma Forest 1600m (lux) 27.IX.2009, leg. Palladino, Parisi, Sciarretta (gen.prp. DAEF GP1); 4♂2♀, S. Ethiopia, Sidamo, 16 km, SW Kibre Mengist, 1700m, 5.8107°N 38.8880°E, 25–26.III.2009, leg. R. Beck, M. Dietl (BC ZSM Lep 81821—failure, 81813, 45468; gen.prp. ZSM G 19462, 19464, 19456); 1♂, S. Ethiopia, Sidamo, 1700m, 25–26.III.2009, 16 km sw Kibremengist, leg. R. Beck, M. Dietl; 1♂2♀, Äthiopien [Ethiopia], Sidamo/Oromaio,

Kibre Mengist, 11,5km S, 1730m, 5°47.446' N 38°57.864' E, 15.–16.V.2012, Dietl, M. + S. & R. Beck (BC ZSM Lep 84766).—**Southern Nations:** 2♂, Äthiopien, Ostafrikanisches South Nation, Wushwush, 7.4 km W, 1910 m, 07°48' 16.05" N [07.304 N 36.057 E], 7.V.2013, Beck R. & R. Wanninger leg. (BC ZSM Lep 81859, 84183; gen.prp. ZSM G 19587); 1♂, Äthiopien [Ethiopia], Ostafrikanischer Graben, Provinz South Nations, Wushwush 16 km W Bonga, 1910m, 07°18.184 N 36.03.520 E, 21.VI.2014, Riedel, G. & Beck R.; 1♂2♀, Äthiopien [Ethiopia], Ostafrikanischer Graben, Provinz South Nations, Bonga Hotel, 1720m, 07°16.444 N 36.14.769 E, 24.VI.2014, Beck, R. & G. Riedel; 4♀, Äthiopien [Ethiopia], Ostafrikanischer Graben [East African Rift valley], Mago Nationalpark, 1217m, 06°47.365' N, 36°27.475'O, 2.VII.2014, Beck, R. & G. Riedel (BC ZSM Lep 84758; gen.prp. ZSM G 16218).

Description. Adult (Fig. 20). Wingspan. Male and female 27–32 mm. Ground colour dark bluish green, slightly irrorated with white scales. Forewing usually without spot at the inner termen. Fore- and hindwings with black discal dot, finely whitish encircled, terminal dots absent. Hindwing termen slightly angled at M3. Length of male palpi 1.3–1.7 times diameter of eye, tip brownish. Female palpi 2.0 times diameter of eye. Frons brown, in some specimens with greenish scales. Antennae bipectinate in male, filiform in female. Male antennal branches pale ochre. Male frenulum present. Male hindtibia with weak pencil, four spurs and terminal process covering 1/3 of first tarsomere.

Male genitalia (Fig. 61). Uncus narrow. Socii very small, almost invisible. Costa of valva at base with long, setose process. Subapical ventral lobe of valva conspicuous, ventral part of valva separated from the rest by a spinulose ridge. Sacculus strongly bent at tip with a few long bristles. Aedeagus (length 1.8–2.0 mm) broad, with short basal stalk and with a long lateral process. Sternum A8 posteriorly slightly sclerotized, flat and smooth without projections or lobes.

Female genitalia (Fig. 92). Sterigma weakly sclerotized. Lamella antevaginalis narrow, half-ring-shaped around antrum. Antrum stronger sclerotized, dilated and corrugate posteriorly. Ductus bursae sclerotized, short. corpus bursae large, pyriform. Signum conspicuous, developed as a curved, sclerotized, transverse ridge.

Differential diagnosis. In habitus similar to *P. corrugata*, but differing in smaller size, darker ground colour, longer palpi, brown frons, male genitalia with different shape of harpe, uncus longer, valva with dorsal projection, aedeagus with lateral process, sternum A8 without projections. In male genitalia *P. fusca* **sp. n.** is reminiscent of *P. inconspicua* Fletcher, 1958 from SW. Uganda especially in the shape of the harpe, but in the latter the uncus is longer, spinose ridge of valva absent, aedeagus with longer basal stalk and without lateral process, sternum A8 with conspicuous, sclerotized, paired posterior processes. Dorsobasal process of valva reminiscent of equivalent in genus *Celidomphax* but these structures probably are not homologous, since in *Celidomphax* the process is not setose. The round and short dorsobasal process in *P. leveneorum* **sp. n.**, however, appears to be homologous.

Genetic data. BIN: BOLD:AAH6150. Intraspecific variation low (0%; n=3). Allied and probably conspecific populations barcoded from Ghana: Distance 0.5%, and identic when excluding the 3rd codon position from analysis. Nearest neighbour in Ethiopia: *P. monikae* **sp. n.** (5.7%).

Etymology. The name refers to the darker ground colour; latin fuscus, -a, -um = dark.

Prasinocyma leveneorum **sp. n.**

(Figs 21, 62)

Holotype. 1♂, C. Ethiopia, Oromia, Southern Bale Mts, Harennä Forest, Katcha clearing, 1810m, 6.6167°N–39.7782°E, 21.II.–7.III.2014, leg. Levene & D. Wiersbowski (BC ZSM Lep 84634 (failure), 85808; gen.prp. ZSM G 19652).

Description. Adult (Fig. 21). Wingspan. Male 34 mm. Ground colour pale bluish green, irrorated with white strigulae. Forewing without spot at the inner termen. On fore- and hindwings, black discal dots barely visible, terminal dots absent. Hindwing termen slightly angled at M3. Length of male palpi 1.0 times diameter of eye, tip and upperside brown, underside whitish. Frons green. Antennae bipectinate in male, antennal branches pale ochre, at base slightly darker. Male frenulum present.

Male genitalia (Fig. 62). Uncus long and narrow. Socii barely visible. Valva elongate, costa with dorsobasal rounded process (cf. preceding species). Subapical ventral lobe of valva narrowly elongated, ventral part of valva corrugate, towards centre of valva with a short, spinulose crest, reminiscent of the equivalent in the preceding

species. Sacculus ending in a long, straight, stoutly sclerotized, laterally spinulose process. Aedeagus with very short basal stalk, length of aedeagus 2.1 mm. Sternum A8 widely bilobous.

Differential diagnosis. In size and habitus very similar to *P. amharensis* **sp. n.**, but in male genitalia and DNA barcode (distance 7.2%) clearly different. *P. leveneorum* **sp. n.** is the only known *Prasinocyma* species with a huge, long, straight, sclerotized sacculus and the only showing a dorsobasal rounded process at the costa of valva. In habitus also reminiscent of *P. aquamarina* **sp. n.**, for genetic divergence see below.

Genetic data. So far, only short COI fragments (164bp) were obtained, without assignation of BIN. Nearest neighbours in Ethiopia: *P. aquamarina* **sp. n.** (1.9%), *P. monikae* **sp. n.** (2.5%), the short distances perhaps biased by the short-fragment condition of the sequence of *P. leveneorum* **sp. n.** The close genetic relationship with *P. aquamarina* suggests them to be a pair of sibling species.

Etymology. The name refers to Mr. and Mrs. Guy and Yvonne Levene and their sons William and Max, for strongly supporting the EIP (Ethiopian Insects Project) and for collecting the holotype.

Prasinocyma germinaria (Guenée, 1858)

(Figs 22, 63, 93)

Prasinocyma germinaria Guenée (1858): 360. Locus typicus: 'Ethiopia' (not specified in detail), (Holotype ♂ MNHN, Paris, type photograph and type genitalia drawing examined in NHM).

Material. **Amhara:** 1♂, Lake Tana (no. 82; BC ZSM Lep 83222, gen.prp. ZSM G 19589). **Oromia:** 2♂, West Shoa (locality no. 28; BC ZSM Lep 10047, 10062; gen.prp. ZSM G 19400); 2♂, Agere Maryam (no. 48; gen.prp. ZSM G 19634); 1♂, Bale (no. 39; gen.prp. DAEF GS). **Southern Nations:** 1♀, Kaffa (no. 62); 2♀, Kaffa (no. 31).

Redescription. Adult (Fig. 22). Wingspan. Male and female 24–30 mm. Ground colour bluish green, irrorated with white strigulae. Forewings without spot at the inner termen. On fore- and hindwings, black discal dot present but variable in intensity, terminal dots absent. Hindwing termen round. Length of male palpi 1.2 times diameter of eye, tip and upperside brown, underside white. In female palpi twice of diameter of eye. Frons brown. Antennae bipectinate in male, filiform in female. Antennal branches pale ochre. Male frenulum present. Male hindtibia with white pencil and four spurs.

Male genitalia (Fig. 63). Uncus dilated at centre. Valva broad, ventral margin with round subapical lobe. Distal part of sacculus sclerotized, with a harpe directed to the base and rectangularly bent towards the costa at tip, densely covered by bristles. Aedeagus comparatively short, length 1.45–1.65 mm, sigmoid, with two lateral sclerites, one sclerite slightly dentate. Sternum A8 poorly sclerotized, with two shallow, truncate projections.

Female genitalia (Fig. 93, described from NHM specimen). Sterigma strongly furrowed transversely, curved around antrum. Lamella postvaginalis with transverse furrows. Ductus bursae long and narrow, towards antrum sclerotized. corpus bursae small, globular. Signum conspicuous.

Genetic data. BIN: BOLD:AAH7602. Intraspecific variation elevated (1.0%). Nearest neighbours in Ethiopia: *P. magica* **sp. n.** (4.9%) and *P. batesi distans* **subsp. n.** (5.1%).

Prasinocyma magica **sp. n.**

(Figs 23, 64)

Holotype. ♂, Äthiopien [Ethiopia, Southern Nations], Ostafrikanischer Graben [East African Rift valley], Mago Nationalpark, 1217m, 06°47.365' N, 36°27.475' O, 2.VII.2014, Beck, R. & G. Riedel (BC ZSM Lep 84759; gen.prp. 16003).

Description. Adult (Fig. 23). Wingspan. Male 26 mm. Ground colour leaf green, strongly irrorated with white strigulae. Forewing costa whitish. Forewing without spot at the inner termen. On fore- and hindwings discal dot present, small, black, sharply bordered. All wings with small, fine terminal dots. Hindwing termen round at M3. Length of male palpi 1.0 times diameter of eye, ochre. Frons pale brown. Antennae bipectinate in male, branches ochre. Male frenulum present. Male hindtibia with pencil and four spurs.

Male genitalia (Fig. 64). Uncus very short. Socii non prominent. Juxta sclerotized, elongate, posterior margin spinulose. valve distally truncate, subterminal ventral lobe conspicuous. Sacculus elongate, terminally with long

sclerotization, dorsally strongly covered with bristles. Aedeagus comparatively short, length 1.5 mm, curved, with two lateral sclerites, one sclerite slightly dentate. Sternum A8 poorly sclerotized, with two shallow, rounded projections.

Differential diagnosis. Despite the existence of BIN-sharers (see genetic data below) from South Africa, Zambia and Zimbabwe, none of the species mentioned in Janse (1930) nor the examined type specimens in the NHM share the shape of male genitalia of this species. *P. vermicularia* with much longer uncus and widely headed spinose harpe. *P. germinaria* with spinose harpe bent dorsad at base of valve, projections of sternum A8 truncate. *P. batesi distans* with green frons, hindwing with double cell spot, in male genitalia harpe forceps-shaped and without bristles, projections of sternum A8 sclerotized, small, close to each other.

Genetic data. BIN: BOLD:ABA7613. BIN-sharing specimens from South Africa, Zambia and Zimbabwe in four sub-clusters at 0.46% distance from each other (three nucleotides distance each). Nearest neighbours in Ethiopia: *P. batesi distans* **subsp. n.** (3.8%) and *P. germinaria* (4.9%).

Etymology. The name refers both to the type locality in the Mago National Park and to the magic fact that so many new Ethiopian species could be found in this genus.

***Prasinocyma batesi* Prout, 1930**

(Figs 24, 65)

Prasinocyma batesi Prout (1930): 24. Locus typicus: Cameroon: Fumban, 4000 ft (Syntype(s) ♂ NHM, examined).

***Prasinocyma batesi distans* subsp. n.**

Holotype. 1♂, Äthiopien, Addis Ababa 22.X.1980, Dr. Angenstein Mgdb. DDR, coll. MNHU (BC ZSM Lep 83224 (failure), 85806; gen.prp. ZSM G 19591).

Description. Adult (Fig. 24). Wingspan. Male 28 mm. Ground colour leaf green, slightly irrorated with white strigulae. Forewing costa red. Forewing without spot at the inner termen. On forewing, one black discal dot present, hindwing with double cell spot, one black the other dark green. On fore- and hindwings, terminal dots conspicuous. Hindwing termen angled at M3. Length of male palpi 1.3 times diameter of eye, tip and upperside reddish, underside white. Frons deep green. Antennae bipectinate in male. Antennal flagellum red, branches pale ochre. Male frenulum present. Male hindtibia with weak pencil and four spurs.

Male genitalia (Fig. 65). Uncus stout. Saccus round. Valva with a large ventral subapical lobe like in *jefferyi*, but narrower. Sacculus with a basal hooked process, and a long and narrow distal process rectangularly bent towards the costa. Length of aedeagus 1.8 mm, with short basal stalk and with two lateral sclerites distally. Sternum A8 trapezoidal, with shallow, crown-shaped sclerotization, the small processes at close position to each other.

Differential diagnosis. Fringe dots of *P. b. distans* conspicuous on fore- and hindwings, in that detail reminiscent of *P. gajdacs*, whilst being less conspicuous in the nominotypical subspecies of *P. batesi*. Wing termen even, as in the nominotypical subspecies, but concave between veins in *P. gajdacs*. Hindwing with double cell spot like in the male type specimen of *P. batesi*, whilst the female type of *P. gajdacs* shows one single sharp and black cell spot only. In genitalia close to nominate subspecies of *P. batesi* from Cameroon, but projections of sternum A8 shorter. Differential features from *P. magica* **sp. n.** see preceding species.

Genetic data. So far, sequenced to a short fragment of 164bp only, no BIN assigned yet. Nearest neighbours in Ethiopia: *P. magica* **sp. n.** (3.8%) and *P. germinaria* (5.1%).

Etymology. The name refers to the remote occurrence from the so far known distribution area of *P. batesi*, latin *distans* = far away.

***Prasinocyma* species (undescribed)**

Material. 1♂, S-Ethiopia [southern Oromia], V.2008, 1520m, 16 km se Yabello, leg. R. Beck, G. Riedel (BC ZSM Lep 14882 with short sequence of 439bp).

Wingspan male. 30 mm. Color and wing pattern uncertain, due to the poor condition of the specimen. Length

of palpi 0.6 times diameter of eye, tip and upperside brownish, underside white. Frons whitish. Antennae bipectinate. Antennal branches pale ochre darker at base. Frenulum absent.

Genetic data. BIN: BOLD:AAL0586. Nearest neighbour in Ethiopia: *P. shoa* (7.1%).

Remarks. A new, undescribed species, well defined in its COI BIN, but, unfortunately, the wings of the single available specimen are too damaged to base an original description upon.

***Prasinocyma aquamarina* sp. n.**

(Figs 25, 94)

Holotype. 1♀, SE. Ethiopia [Oromia], Bale Mts. 10 km S Rira, 2450m, 6.8092N 39.6386E, 25.III.2009, leg. R. Beck, M. Dietl (BC ZSM Lep 26135; gen.prp. ZSM G 19455).

Description. Adult (Fig. 25). Wingspan. Female 38 mm. Ground colour pale bluish green, irrorated with white strigulae. Forewings without spot at the inner termen. Fore- and hindwings with blackish green discal dot, terminal dots absent. Hindwing termen slightly angled at M3. Length of female palpi twice diameter of eye. Frons pale green. Female antennae filiform.

Female genitalia (Fig. 94). Antrum sub-rectangular. Sterigma (lamella postvaginalis) wide, with the anterior margin irregularly shaped. Ductus bursae of medium length. Corpus bursae pyriform, with small signum, laterally tapered and anteriorly with short, paired, tapering projections.

Differential diagnosis. Slightly larger than *P. beryllaria* sp. n. (so far available only in the opposite sex), otherwise almost indistinguishable in habitus. Although only one female is available, the DNA barcode clearly supports its description as a new species.

Genetic data. BIN: BOLD:AAF8222. Nearest neighbours in Ethiopia: *P. leveneorum* sp. n. (1.9%), *P. croca* (5.4%), distance from *P. pupillata* (South Africa) 5.3%, from *P. beryllaria* sp. n. 9.9%. Grouping more closely with the preceding undescribed species when excluding the 3rd codon position. The close genetic relationship with *P. leveneorum* sp. n. (perhaps biased by the short-fragment condition of the sequence of *P. leveneorum* sp. n.) suggests them to be a pair of sibling species.

Etymology. The name refers to the green ground colour similar to that of the aquamarine gem.

***Prasinocyma beryllaria* sp. n.**

(Figs 26, 66)

Holotype. 1♂, S. Ethiopia [southern Oromia], Sidamo 13 km W Yabello Motel, 1960m, 4.90°N 38.01°E, 28–30.III.2009 (BC ZSM Lep 81817, gen.prp. ZSM G 19463).

Description. Adult (Fig. 26). Wingspan. Male 31 mm. Ground colour pale bluish green, irrorated with white strigulae. Forewings without spot at the inner termen. Fore- and hindwings with black discal dot, whitish encircled. Hindwing termen slightly angled at M3. Length of male palpi 1.0 times diameter of eye, tip and upperside ochraceous, underside white. Frons green. Antennae bipectinate in male, antennal branches pale ochre. Male frenulum present.

Male genitalia (Fig. 66). Uncus short, rounded at tip, broad at base. Socii reduced to inconspicuous setose patches. Valva broad, sub-rectangular distally, subapical ventral lobe large. Sacculus membranous. A sclerotized, slightly dentate ridge arising from the centrobasal part of valve to the ventral margin between tip of sacculus and subapical lobe. Aedeagus large and very broad, length 2.35 mm, with two short cornuti and a large lateral sclerite. Sternum A8 with two poorly sclerotized, shallow, round lobes.

Differential diagnosis. In habitus almost indistinguishable from the somewhat larger *P. aquamarina* sp. n. (so far available only in the opposite sex), but the large genetic distance clearly contradicts conspecificity. In habitus also reminiscent *P. fusca* sp. n., the latter differing in the brown frons, the longer palpi, furthermore with strongly differing genitalia and COI barcodes. In male genitalia the dentate ridge arising from the centrobasal part of valve possibly homologous to the spinulose process at the same position in *P. corrugata*. The latter also shows two cornuti in the aedeagus and a very similar habitus. In *P. caecata* Fletcher, 1958 from SW Uganda/NE Zaire there is a similar ridge arising from the centrobasal part of valve, but less sclerotized, not dentate and not exceeding the ventral margin of valve; furthermore the socii are longer, the lateral sclerite of aedeagus smaller and the posterior projections of sternum A8 triangular.

Genetic data. BIN: BOLD:ACL7753. Nearest neighbours in Ethiopia: *P. albivenata* (5.8%), *P. neglecta* (8.9%), *P. gajdacsii* (9.5%) and *P. beryllaria* **sp. n.** (9.9%).

Etymology. The name refers to the green ground colour similar to that of the beryl gem.

***Prasinocyma lutulenta* sp. n.**

(Figs 27, 95)

Holotype. 1♀, S. Ethiopia [Southern Nations], Gemu Gofa, Omo, Arba Minch, 1335m, 6.0161°N, 37.5590°E, 24.II.2013, leg. D. Wiersbowski, coll. ZSM; BC ZSM Lep 81481 (failure), 85809; gen.prp. 16040.

Description. Adult (Fig. 27). Wingspan. Female 32 mm. Ground colour pale bluish green, irrorated with white strigulae. Forewing without spot at the inner termen. Fore- and hindwings with an inconspicuous black discal dot, terminal dots absent. Hindwing termen slightly angled at M3. Length of female palpi 2.0 times diameter of eye, tip and upperside reddish, underside white. Frons green, reddish towards vertex. Antennae filiform in female.

Female genitalia (Fig. 95). Apophyses comparatively long. Sterigma semi-membranous with granulose surface, posteriorly with alate projections, anteriorly shallowly bilobous, bent upwards (ventrad). Ductus bursae long. Corpus bursae oval. Signum developed as a transverse sclerite, anteriorly with two spinules.

Differential diagnosis. Several species are similar in habitus, e.g. *P. aquamarina* **sp. n.**, *P. monikae* **sp. n.** and *P. beryllaria* **sp. n.**, the last two being available only in the opposite sex but clearly distinct in their COI barcode. *P. aquamarina* **sp. n.** differs also in female genitalia in its shorter ductus bursae and the stronger sclerotization of the furrowed sterigma. The 'closest' genetic ally *P. amharensis* differs from *P. lutulenta* sp.n. in the completely lacking discal dots, in female genitalia in the strikingly different shape of the sterigma.

Genetic data. BIN: BOLD:ACL9893. Nearest neighbour in Ethiopia: *P. amharensis* **sp. n.** (9.4%), distance from an undescribed *Prasinocyma* species (Tanzania, province Iringa) 6.8%. Genetically strongly diverging from all other species (>150 species) so far barcoded from the African continent, thus a description based on a single female seems justified.

Etymology. The name refers to the red and green frons and palpi, lat. *lutulentus* = multicolourous.

***Prasinocyma septentrionalis* sp. n.**

(Figs 28, 67, 96)

Holotype. ♂, S. Ethiopia [Southern Nations], Arba Minch, Reg. Omo, Prov. Gemu Gofa, 1350–1450m 6°0'N 37°33'E, 14.IV–2.V.2001, leg. G. Riedel, gen.prp. ZSM G 19403, BC ZSM Lep 13197, coll. ZSM.

Paratypes. Oromia: 2♂1♀, Ethiopia, Bale mountains, Harennä Forest 1600m (lux) 21.II.2010, leg. F. Parisi. A. Sciarretta, coll. DAEF (gen.prp. DAEF GL1); 1♀, Ethiopia, Bale mountains, Harennä Forest Karcha Camp 2350m (lux) 20.II.2010, leg. F. Parisi, A. Sciarretta, coll. DAEF; 3♂3♀, C. Ethiopia, Oromia, Southern Bale Mts, Harennä Forest, Katcha clearing, 1810m, 6.6167°N–39.7782°E, 21.II.–7.III.2014, D. Wiersbowski; 2♀, Ethiopia, Bale Mountains, Harennä Forest, Afro-montane forest, 06°42'58"N/39°43'31"E, 2381m, 29.X.2011, leg. H. S. Staude. **Southern Nations:** 3♀, S. Ethiopia, Arba Minch, Reg. Omo, Prov. Gemu Gofa, 1350–1450m 6°0'N 37°33'E, 14.IV–2.V.2001, leg. G. Riedel (BC ZSM Lep 13198, 13197; gen.prp. ZSM G 19408); 1♀, S. Ethiopia, Gamu Gofa, V.2008, Arba Minch 1350m, leg. R. Beck, G. Riedel (BC ZSM Lep 18040); 1♂, Äthiopien [Ethiopia], Ostafrikanischer Graben [East African Rift Valley], Prov. Gamu Goffa, Arba Minch, Nachisar Nationalpark 1180–1380m, 06°00' N 37°47' E, 17–19.V.2013, Beck R. & R. Wanninger leg (BC ZSM Lep 78495); 1♀, Äthiopien [Ethiopia], Ostafrikanischer Graben [East African Rift Valley], Southern Nations, Bonga, 16 km E, 2440m, 07°11' N 36°28' E, 04.V.2013, Beck R. & R. Wanninger leg (BC ZSM Lep 81858 failure); 1♂1♀, Ethiopia, Prov. Kaffa, 10 km n Bonga, 1550m 7°21'N 36°25'E, 29.IV.2008, leg. S. Naumann, H. Schnitzler; 1♀, Äthiopien [Ethiopia], Ostafrikanischer Graben [East African Rift valley], Mago Nationalpark, 1217m, 06°47.365' N, 36°27.475'O, 2.VII.2014, Beck, R. & G. Riedel (BC ZSM Lep 84757).

Description. Adult (Fig. 28). Wingspan. Male and female 32–36 mm. Ground colour bluish green, irrorated with white strigulae. Forewings with a white dot at ½ of the inner margin, sometimes brown in the distal half. Fore- and hindwings, with black or reddish black discal dot, conspicuously whitish encircled. Terminal dots absent from all wings. Hindwing termen angled at M3. Length of male palpi 1.2 times diameter of eye, tip and upperside dark

brown with greenish scales, underside white. Length of female palpi 1.7 times diameter of eye. Frons deep green, sometimes irrorated with redbrown scales. Antennae bipectinate in male, with broad sub-dentate flagellum in female. Antennal branches ochre. Male frenulum present. Male hindtibia with white pencil, four spurs and terminal process covering half of first tarsomere.

Male genitalia (Fig. 67). Uncus long (1.2–1.35 mm), valva elongate, with small subapical ventral lobe, sclerotized long and stout harpe curved towards the costa and here again curved towards base of valva, with spinose, rounded tip. Aedeagus comparatively short (2.0–2.1 mm), straight, stalk very short, with two lateral sclerites and small subapical, lateral tooth. Sternum A8 without lobes or projections.

Female genitalia (Fig. 96). Sterigma triangular, edges rounded. Ductus bursae comparatively long (2.0 mm), broad, sclerotized. Corpus bursae globular, signum small with two posterior teeth.

Differential diagnosis. In habitus well matching the type series of *P. croca* Fletcher, 1978 (locus typicus: Tanzania, Usa River; holotype male TMB Budapest, paratype in NHM, examined), but in male genitalia strongly differing in the shape of the harpe which is only slightly curved at the ventral margin of valva in *P. croca*. Furthermore the uncus is shorter (1.0 mm) and the aedeagus narrower and longer (2.3 mm) in *P. croca*. Male genitalia of *P. pupillata* (Warren, 1902) as figured in Janse (1935: 289) similar, but in the latter the uncus much shorter, the valva and its subapical ventral lobe broader, the harpe narrower and the aedeagus much longer.

Genetic data. BIN: BOLD:AAD6947. Intraspecific variation 0.95% (n=4). Nearest neighbours in Ethiopia: *P. nereis* (3.7%), *P. corrugata* (4.4%) and *P. aquamarina* sp. n. (5.4%). Outside Ethiopia diverging from *P. croca* by 1.7% (sequenced from Tanzania = locus typicus) and from *P. pupillata* by 3.8% (sequenced from South Africa; locus typicus = Tanzania).

Etymology. The name refers to the distribution area north of the distribution area of the sister species (*P. croca*); latin septentrionalis = northern.

***Prasinocyma neglecta* Prout, 1921**

(Figs 29, 68, 97)

Prasinocyma neglecta Prout (1921): 138. Locus typicus: Tanzania, East Tanganyika, Urindi District: Upper Rivubu River (Holotype ♂ NHM, examined).

Material. Amhara: 1♂, Debre Sina (locality no. 59; BC ZSM Lep 40507, gen.prp. ZSM G 19460); 1♂, Addis Ababa (no. 41; BC ZSM 83223, gen. prp. 19590).—**Oromia:** 2♂1♀, Bale (no. 80; gen.prp. ZSM G 19638, 19648; BC ZSM Lep 84188, 84189, 84190).

Redescription. Adult (Fig. 29). Wingspan. Male and female 28–35 mm. Ground colour leaf green (more bluish in Bale specimens), irrorated with white strigulae. Forewings with a white dot at 1/2 of the inner margin, with blackish brown scales distally in specimens from Bale region. On fore- and hindwings, black discal dot present, terminal dots absent. Hindwing termen slightly angled at M3. Length of male palpi 0.8–1.0 times diameter of eye, tip and upperside brownish, underside white. Length of female palpi 1.2 times diameter of eye. Frons green. Antennae bipectinate in male, filiform in female. Antennal branches ochre. Male frenulum well developed. Male hindtibia with four spurs and large projection at tip, pencil absent.

Male genitalia (Fig. 68). Genitalia of the holotype from Tanzania (NHM) well corresponding to those of the Ethiopian populations. Uncus narrow. Socii developed but short, length about 1/4 to 1/3 length of uncus. Subapical lobe of valva conspicuous. Sacculus ending in a long and narrow harpe, pointed at tip. Aedeagus short (1.6–1.75 mm) and broad with a large lateral terminal sclerite and a smaller cornutus with a patch of corrugate vesica at the base of the cornutus. Sternum A8 membranous, with paired shallow lobes at the posterior margin, sometimes sub-triangular.

Female genitalia (Fig. 97). Sterigma divided into a bipartite, slightly sclerotized lamella postvaginalis and an irregularly shaped, non-sclerotized lamella antevaginalis. Ductus bursae short, membranous, strongly dilated towards antrum. Corpus bursae membranous, elongate. Signum absent.

Differential diagnosis. Related to *P. trifilifimbria* Prout, 1915 (Cameroon; Holotype male NHM, dissected, examined) with subsp. *uniformata* Fletcher, 1958 (Kenya; Holotype male NHM, dissected, examined). In male genitalia of *P. trifilifimbria* and its East African subspecies the sacculus is much stronger sclerotized and stronger curved at tip, socii slender, half length of uncus, in the aedeagus the 'cornutus' larger, developed as a second,

laterally projecting sclerite, sternum A8 strongly sclerotized, with two large posterior lobes and a narrow notch between. Both holotypes of *P. neglecta* and *P. t. uniformata* are very similar in habitus, with a bicolorous (black/white) spot at the inner margin of forewing, similar to that of *P. neglecta* from Bale region. In the (West African) holotype of *P. trifilifimbria*, however, that spot is smaller and without black scales similar to *P. neglecta* from the Amhara region. The Ethiopian *P. gajdacsii* Prout, 1930 (see below) is also similar in habitus but differs in conspicuous terminal dots on all wings and in the shape of the hindwing termen which is concave between the veins. *P. crenulata* Fletcher, 1958 from SW Uganda/NE Zaire belongs to the same group, but differs in the less conspicuous discal dots on all wings (on hindwing apparently absent) and in the sclerotized, flat, irregularly shaped posterior margin of sternum A8. *P. triangulata* Fletcher, 1958 from SW Uganda/NE Zaire with longer harpe and different shape of aedeagus in male genitalia.

Genetic data. BIN: BOLD:AAY3244. Nearest neighbours: *P. trifilifimbria uniformata* (6.4 %) and *P. shoa* (6.4%). *P. trifilifimbria uniformata* (BIN: BOLD:AAF8223; barcoded and dissected from Tanzania and Kenya) with a maximum variation of 0.9% (n=3).

***Prasinocyma gajdacsii* Prout, 1930**

(Figs 30, 69)

Prasinocyma gajdacsii Prout (1930): 25. Locus typicus: Ethiopia, Addis Ababa (Holotype ♀ NHM, examined).

Material. Oromia: 1♀, Bale (locality no. 65; BC ZSM Lep 81480); 2♂, Bale (no. 64; gen.prp. ZSM G 19649); 2♂, Bale (no. 57; BC ZSM Lep 81488; gen.prp. ZSM G 19530); 1♀, Bale (no. 91; BC ZSM Lep 81806, gen.prp. DAEF GT); 1♀, Bale (no. 86).

Redescription. Adult (Fig. 30). Wingspan. Male and female 32–35 mm. Ground colour leaf green, irrorated with white strigulae. Forewings with a very pale yellowish dot at 1/2 of the inner margin, sometimes bordered by some brown scales. Fore- and hindwings with a black discal dot and small black terminal dots on the vein endings, the latter proximally accompanied by whitish dots. Hindwing termen concave between veins. Length of male palpi 0.8 times diameter of eye, tip brownish. Length of female palpi 1.5 times diameter of eye. Frons deep green. Antennae bipectinate in male, filiform in female. Antennal branches ochre. Male frenulum well developed. Male hindtibia with four spurs, at tip slightly projecting, pencil absent.

Male genitalia (Fig. 69). Uncus narrow. Socii one third length of uncus. Valva broad, sub-rectangular, subapical ventral lobe conspicuous. Sacculus long, ending in a narrow, sclerotized harpe, slightly curved towards the ventral margin of valva. Length of aedeagus 2.0 mm, with narrow basal stalk, distally tapering, very broad in the central part, laterally with a round, projecting sclerite. Sternum A8 with two sclerotized broad truncate projections, deeply concave between.

Female genitalia exactly corresponding to those of the holotype, examined in the NHM (Fig. 98). Sterigma large, slightly sclerotized, with two stronger sclerotized, round, lateroposterior sclerites. Ductus bursae short, corpus bursae small, both membranous, signum absent.

Differential diagnosis. To be distinguished from other *Prasinocyma* species especially by the conspicuous black terminal dots at the vein endings, with accompanying white dots proximally, and the conspicuously arched wing termen between the veins. In habitus somewhat similar to *P. jefferyi*, but somewhat larger, hindwing terminal dots more distinct, wings stronger suffused with white scales. In male genitalia reminiscent of *P. triangulata* Fletcher, 1958 from SW Uganda/NE Zaire but the latter with short, membranous, triangular projections on sternum A8 and the adult lacks the conspicuous terminal dots.

Genetic data. BIN: BOLD:ACL9892. Nearest neighbours in Ethiopia: *P. aetheraea* (8.1%) and *P. neglecta* (9.4%).

The *aetheraea* species-group

Five species in Ethiopia. This grouping seems genetically very 'robust' in different alignments, algorithms, and also when excluding the third codon position from analysis. In male genitalia this is a rather homogenous group, socii

absent (or reduced to small, hardly visible, setose patches), sacculus strongly sclerotized, with long and narrow, dorsal projection forming a characteristic forceps-shaped structure, sternum A8 usually with sclerotized bilobous projection at centre. *P. stictimargo* (Warren, 1902) from Kenya may also belong to this group, judging from the shape of dorsal projection of sacculus in male genitalia, but here the ventral part of sacculus is not sclerotized to tip. For possible relationships with *P. robusta* **sp. n.** and *P. amharensis* **sp. n.** see above under the *nereis* species-group.

***Prasinocyma aetheraea* (Debauche, 1937)**

(Figs 31, 70, 99)

Prasinocyma aetheraea Debauche (1937): 327. Locus typicus: Ethiopia, Addis Ababa, "over 8000 ft" (Holotype ♀ NHM, examined).

Material. Oromia: 1♂9♀, Bale (locality no. 65; BC ZSM Lep 81484, 81486, 81487; gen.prp. ZSM G 19529); 1♀, Bale (66; BC ZSM Lep 26126); 7♀, Bale (no. 5; BC ZSM Lep 13200, 13201, 13202; gen.prp. ZSM G 19409, 19410); 1♀, Bale (no. 67; BC ZSM Lep 26141); 1♀, Bale (no. 25; BC ZSM Lep 13153; gen.prp. G 19411); 2♂7♀, Bale (no. 64; gen.prp. ZSM G 19650, 19655); 1♂, Bale (no. 80; gen.prp. ZSM G 19639); 1♂2♀, Bale (no. 92; BC ZSM Lep 81863, 84184; gen.prp. 19586); 3♀, Bale (no. 99; BC ZSM Lep 84764).

Redescription. Adult (Fig. 31). Wingspan. Male and female 32–35 mm. Wing coloration appearing as pale whitish-green ground colour strongly irrorated with dark green, forming diffuse patches with different intensity of green, forewing costa red. Forewings without spot at the inner termen, a diffuse discal dot sometimes weakly developed. On hindwings, discal spot developed as elongate diffuse dark green streak towards costa, sometimes with a small darker dot in its centre. Black terminal dots present on all wings. Hindwing termen slightly concave between veins. Length of male palpi 0.8–1.0 times diameter of eye, tip and upperside reddish, underside white. Length of female palpi 1.2–1.4 times diameter of eye. Frons reddish. Antennae bipectinate in male, filiform in female. Antennal branches pale ochre. Male frenulum present. Male hindtibia with four spurs, pencil absent.

Male genitalia (Fig. 70). Uncus comparatively short, stout, curved. Ventral subapical lobe of valva conspicuously projecting. Centre of valva with a long, corrugate and slightly spinulose ridge. Sacculus strongly sclerotized at its ventral and dorsal margin ('forceps-shaped'), distally curved towards costa of valva, spinulose and pointed at tip. Aedeagus small, length 1.35–1.6 mm, bent and pistol-shaped, stalk short, about 1/6 length of aedeagus. Centre of aedeagus with a narrow sclerite. Sternum A8 with paired triangular projections, roundly concave at centre.

Female genitalia (Fig. 99). Sterigma furrowed. Ductus bursae sclerotized, short. Corpus bursae pyriform. Signum present, but very small.

Differential diagnosis. Male genitalia reminiscent of those of *P. fallax* **sp. n.**, but in the latter the spinose tip of sacculus overlapping with the broad part, aedeagus longer, with two cornuti, basal stalk longer, sternum A8 with sub-truncate projections.

Genetic data. BIN: BOLD:AAD6949. Intraspecific variation low: 0.55% (n=10). Nearest neighbour in Ethiopia: *P. fallax* **sp. n.** (3.3%).

Remarks. Female ratio at light very high, 27/33 = 82%. The identification of the Bale mountain populations as *P. aetheraea* is currently based on the well corresponding structure of the female genitalia with those of the type specimen. The type locality of the following species (*P. fallax* **sp. n.**), however, is situated slightly closer to Addis Ababa (140km) than the Bale mountains (220km) and the exact type locality of *P. aetheraea* may be far outside the city. Since no female is known of the following species (*P. fallax* **sp. n.**) and since the type specimen of *P. aetheraea* is not yet DNA barcoded that question awaits final confirmation.

Prasinocyma fallax* **sp. n.*

(Figs 32, 71)

Holotype. 1♂, Ethiopia, Prov. Oromiya [Amhara], ZW. Debre Sina & Sembo, Umg. Debre Sina, N09°35.0650, E39°44.417, 06.IV.2010, 2730 m—lux, leg. H. Sulak, coll. M. Sommerer (BC ZSM Lep 40508; gen.prp. G 19457).

Description. Adult (Fig. 32). Wingspan. Male 32 mm. Wing coloration appearing as pale whitish-green

ground colour strongly irrorated with dark green, forming diffuse patches with different intensity of green, forewing costa red. Forewings without spot at the inner termen and without discal dots. On hindwings, discal spot developed as elongate diffuse dark green streak towards costa. Small black terminal dots on all wings. Hindwing termen slightly concave between veins. Length of male palpi 0.8 times diameter of eye, palpi reddish, underside irrorated with white 'hairy' scales. Frons reddish. Antennae bipectinate in male, antennal branches ochre. Male frenulum present.

Male genitalia (Fig. 71). Valva with conspicuous subapical ventral lobe. Centre of valva with a long and broad corrugate fold. Sacculus sclerotized, broad, the distally curved, spinose tip overlapping with the broad part of sacculus. Aedeagus with two cornuti, stalk about 1/4 of aedeagus length (1.7 mm). Sternum A8 sclerotized with paired, rounded, sub-truncate projections.

Differential diagnosis. In habitus without clear differential features from *P. aetheraea*, terminal dots less conspicuous, dark green irroration slightly finer. Differences in male genitalia clear-cut, see differential diagnosis under *P. aetheraea*.

Genetic data. BIN: BOLD:AAY3243. Nearest neighbour in Ethiopia: *P. aetheraea* (3.3%). The sequences are identical when excluding the 3rd codons from analysis.

Etymology. The name refers to the external similarity with its sister species (*P. aetheraea*), latin fallax = misleading.

***Prasinocyma tricolorifrons* (Prout, 1913)**

(Figs 33, 72, 100)

Prasinocyma tricolorifrons Prout (1913): 438. Locus typicus: Kenya: western slopes of Mt Kenya, 5000–8000 ft (Holotype ♂ NHM, examined).

Material. Addis Ababa: 1♂ Addis Ababa (locality no. 35; BC ZSM Lep 81811 failure; gen.prp. DAEF GV).

Oromia: 1♂, Bale (no. 72; gen.prp. ZSM G 19640); 8♀, Bale (no. 65; BC ZSM Lep 26168); 1♂, Bale (no. 14; BC ZSM Lep 81810); 1♀, Bale (no. 39; BC ZSM Lep 81822); 2♀, Bale (no. 33; BC ZSM Lep 14907, 18071; gen.prp. ZSM G 19406); 3♂1♀, Bale (no. 72; gen.prp. ZSM G 19651); 1♀, Bale (no. 81; BC ZSM Lep 81807); 1♀, Bale (no. 5; BC ZSM Lep 13203; gen.prp. ZSM G 19407). 3♂, Bale (no. 86; BC ZSM Lep 83219); 1♂, Bale (no. 87); 1♂1♀, Bale (no. 93).

Redescription. Adult (Fig. 33). Wingspan. Male and female 30–35 mm. Ground colour leaf green, irrorated with white strigulae. Forewings without spot at the inner termen. Fore- and hindwings with black discal dot, small black terminal dots rarely present but inconspicuous. Forewing costa red. Hindwing termen round. Length of male palpi 1.0 times diameter of eye, tip and upperside of palpi reddish, underside white. Length of female palpi 1.2 times diameter of eye. Frons reddish-brown. Antennae bipectinate in male, filiform in female. Antennal branches pale ochre, at base slightly darker. Male frenulum present. Male hindtibia with four spurs, pencil absent.

Male genitalia (Fig. 72). Valva with a comparatively small subapical lobe. Sacculus strongly sclerotized, bent and smoothly sclerotized at tip, spoon-shaped and with a long and narrow basal projection directed towards costa (forceps-shaped). Aedeagus long (1.9–2.1 mm), straight and narrow, distally sharply tapering, without conspicuous sclerites or cornuti, vesica with longitudinal furrows at the tip. Sternum A8 with sclerotized bilobous projections, close to each other at the centre of the posterior margin.

Female genitalia (Fig. 100). Sterigma characteristically hut-shaped (or jellyfish-shaped). Ductus bursae comparatively long, sclerotized and dilated towards antrum. Signum weakly sclerotized, with transverse fold.

Differential diagnosis. Structure of the valva (despite great differences in wing coloration) revealing close relationships with *Prasinocyma albivenata* and *P. trematerrai* **sp. n.** *P. trematerrai* **sp. n.** (closest genetic neighbour) clearly differing in the whitish hindwings, male genitalia of *P. trematerrai* **sp. n.** with tip of sacculus not bent, aedeagus shorter, posterior lobes of sternum A8 closer to each other. In genitalia, reminiscent also of *P. aetheraea*, but differing in the smoothly bordered harpe, aedeagus much longer and lobes of sternum A8 stronger projecting.

Genetic data. BIN: BOLD:AAD6948. Intraspecific variation elevated: maximum pairwise distance 1.4% (n=7). Nearest neighbour in Ethiopia: *P. trematerrai* **sp. n.** (3.8%).

Remarks. Female ratio at light high, 14/23 = 61%.

***Prasinocyma trematerrai* sp. n.**

(Figs 34, 73, 101)

Holotype. ♂, Ethiopia [Oromia], Bale Mountains—Dinsho [7.099° N 39.790° E], 3100m (lux) 25.IX.2009, leg. Palladino, Parisi, Sciarretta, coll. ZSM (BC ZSM Lep 81809).

Paratypes. Oromia: 2♀, id., coll. DAEF; 2♀, SE. Ethiopia, Bale, Bale Mts., 15 km sw Goba. 3100m, 6.9287N 39.9406E, 21.III.2009, leg. R. Beck, M. Dietl (BC ZSM Lep 81485); 1♂, C. Ethiopia, Bale Mts., Reg. Bale, Umg. Dinsho, 3050–3100m N7°07'E39°38', 14.V.–23.V.1999, leg. Beck/Hiermeier (BC ZSM Lep 13151; gen.prp. ZSM G 19431); 1♂, Ethiopia, Bale Mountains—Dinsho [7.099° N 39.790° E], 3100m (lux) 18.II.2010, leg. Parisi, Sciarretta (gen.prp. DAEF GA1); 3♀, Ethiopia, Oromia, Bale, Dinsho headq., 3000m, 30.IV.2009, 7°05'N 39.47'E, S. Naumann, H. Schnitzler; 2♀, C. Ethiopia, Oromia, S. Bale Mts, Harennā Forest, 3800m, 6.7875°N 39.7707°E, 12.X.2013, H. Sulak & A. Schintlmeister (BC ZSM Lep 81493); **Southern Nations:** 3♀, Äthiopien [Ethiopia], Ostafrikanischer Graben, Provinz South Nations, Bonga, 12km E, 2414m, 07°17.652 N 36.22.567 E, 23.VI.2014, Beck, R. & G. Riedel (BC ZSM Lep 84751).

Description. Adult (Fig. 34). Wingspan. Male and female 27–35 mm. Fore- and hindwings narrower than in other species of the genus *Prasinocyma*; ground colour of forewing leaf or bluish green, hindwing whitish with slight green tinge. Forewings without spot at the inner termen, black discal dot present, diffuse or absent on hindwing. Terminal dots absent from all wings. Hindwing termen round. Male palpi very short, 0.6–0.7 times diameter of eye, palpi reddish, tip darker. Length of female palpi 1.0–1.2 times diameter of eye. Frons reddish. Antennae bipectinate in male, filiform in female. Antennal branches ochre. Male frenulum absent. Male hindtibia with four spurs, the proximal pair sometimes shorter or vestigial, pencil absent.

Male genitalia (Fig. 73). Uncus comparatively short. Valva with small subapical ventral lobe. Sacculus stoutly sclerotized, at tip not bent, dorsal projection narrow (length 0.7–0.75 mm), parallel to sacculus, slightly curved. Aedeagus narrow, comparatively short (1.5–1.55 mm), with two lateral sclerotizations, vesica granulated towards tip. Sternum A8 with sclerotized bilobous projection at centre, lobes close to each other and with a very small, shallow notch between.

Female genitalia (Fig. 101). Lamella postvaginalis sub-rectangular or sub-trapezoid, sclerotized. Lamella antevaginalis broad, membranous, but with two lateral, furrowed sclerites. Antrum with a large, additional sclerite, longitudinally wrinkled, posteriorly bilobous. Ductus bursae short, sclerotized towards antrum. Corpus bursae membranous, globular. Signum developed as an inconspicuous transverse ridge.

Differential diagnosis. Clearly differing from all congeners (except *P. albivenata*) in the whitish hindwings, lacking male frenulum a.s.o. *P. albivenata* clearly differing in the white-marked forewing veins.

Genetic data. BIN: BOLD:ACL6986. Intraspecific variation elevated: maximum pairwise distance 1.8% (n=4). Nearest neighbours in Ethiopia: *P. tricolorifrons* (3.8%) and *P. albivenata* (4.1%).

Remarks. In the structure of the valva (despite great differences in wing coloration) reminiscent of *P. albivenata*, *P. tricolorifrons* and *P. stictimargo*.

Etymology. The name refers to Prof. Pasquale Trematerra, Campobasso (Italy), for his support of studies on Ethiopian geometrids and for supervision of the co-author Francesco Parisi.

***Prasinocyma trematerrai simienensis* subsp. n.**

(Figs 35, 74, 102)

Holotype. 1♂, Ethiopia [Amhara], Debark, Simien Mountains, Chennek Camp, 13°15'40"N/38°11'40"E, 3633 m, Afro-alpine meadow/shrubland, 01-11-2011, leg. H. S. Staude, coll. ZSM (BC ZSM Lep 83216 (failure), 85810; gen.prp. ZSM G 19594).

Paratypes. Amhara: 2♂1♀, Ethiopia, Debark, Simien Mountains, Chennek Camp, 13°15'40"N/38°11'40"E, 3633 m, Afro-alpine meadow/shrubland, 01-11-2011, leg. H. S. Staude; 3♂, Ethiopia, Debark, Simien Mountains, Sankaber Camp, 13°13'51"N/38°02'25"E, 3250m, Afro-alpine meadow/shrubland, 31-10-2011, leg. H. S. Staude, coll. ZSM; 1♀ Äthiopien, 14–15.1.1996, Simien Mts., 3100 m, leg. W. Mey & K. Ebert, coll. MNHU (BC ZSM Lep 83215).

Other material examined: 1♂, Ethiopia, West Shewa, Ambo, 2200m a.s.l., V.2007, leg. V. Kravchenko & G. Müller (BC ZSM Lep 09922 (failure), gen. prp. G 19415).

Description. Adult (Fig. 35). Wingspan. Male and female 30–35 mm. In wing shape and coloration reminiscent of the nominotypical subspecies: ground colour of forewing leaf or bluish green, hindwing whitish with slight green tinge. Forewings without spot at the inner termen, black discal dot present, also on hindwing, here green. Terminal dots absent from all wings. Hindwing termen round. Male palpi very short, 0.6–0.7 times diameter of eye, palpi reddish, tip darker. Length of female palpi 1.0–1.2 times diameter of eye. Frons reddish. Antennae bipectinate in male, filiform in female. Antennal branches ochre. Male frenulum absent. Male hindtibia with four spurs, the proximal pair sometimes shorter or vestigial, pencil absent.

Male genitalia (Fig. 74). Uncus comparatively short. Valva with small subapical lobe, sacculus stout and sclerotized at tip not bent, with a narrow basal projection, parallel to the sacculus, slightly curved. Dorsal projection of sacculus comparatively long (0.85 mm). Aedeagus very long (2.0 mm). Sternum A8 with sclerotized weak bilobous projection at centre, with deep notch between.

Female genitalia (Fig. 102). Lamella postvaginalis sub-trapezoid, sclerotized. Lamella antevaginalis broad, membranous, but with two lateral, smooth sclerites. Antrum with a large, additional sclerite, longitudinally wrinkled, posterior margin irregularly shaped. Ductus and corpus bursae as in the nominotypical subspecies.

Differential diagnosis. In habitus reminiscent of the nominotypical subspecies, but on average slightly larger, green colour of forewings deeper, discal spot of hindwings usually present, in male genitalia the dorsal process of sacculus longer, aedeagus longer, posterior margin of sternum A8 deeper notched.

Genetic data. BIN: BOLD:ACL6986. Distance from nominate subspecies 1.3%.

Remarks. Male genitalia of one specimen from Shoa province (see above) better matching those of *P. t. simienensis* **subsp. n.** than those of the nominotypical subspecies. Not included in the type series because of the isolated locality and the poor condition of the specimen (wings rubbed and damaged).

Etymology. The name refers to the type locality in the Simien mountains.

***Prasinocyma albivenata* Herbulot, 1983**

(Figs 36, 75, 103)

Prasinocyma albivenata Herbulot (1983): 14. Locus typicus: Ethiopia, [Bale Mts.], Dinsho (Holotype ♀ MNHN Paris, 3 paratypes examined in coll. Herbulot-ZSM, one barcoded: BC ZSM Lep 76125).

Material. Oromia: 2♀, Bale (locality no. 25; BC ZSM Lep 13152; gen.prp. ZSM G 19405); 1♀, Bale (no. 33; BC ZSM Lep 18069); 1♂, Bale (no. 36; gen.prp. DAEF GQ1); further examined type material from Ethiopia, see above.

Redescription. Adult (Fig. 36). Wingspan. Male and female 30–35 mm. Wings narrower than in other species of the genus *Prasinocyma*. Ground colour of forewing leaf green, with conspicuous white streaks on the veins; hindwing whitish, with slight green tinge towards termen. Forewings without spot at the inner termen. Black or brown discal dot present on forewings, but absent from hindwings. Terminal dots absent from all wings. Hindwing termen round. Length of male palpi 1.0 times diameter of eye, palpi brown. Length of female palpi 1.2 times diameter of eye. Frons whitish with pale green scales. Antennae bipectinate in male, filiform in female. Antennal branches ochre, at base slightly darker. Male frenulum absent. Male hindtibia with four spurs, pencil absent.

Male genitalia (Fig. 75). Uncus short. Valva with small ventral, subapical lobe, slightly sclerotized. Sacculus broadly sclerotized, at tip rounded, basal projection stout, tapering. Aedeagus short (1.4 mm), and narrow. Sternum A8 with sclerotized bilobous projection, deeply notched at centre.

Female genitalia (Fig. 103). Sterigma with two rounded anteriolateral projections, hut-shaped in the centre, with small posterior notch. Antrum dilated, with paired lateral sclerites. Ductus bursae of medium length (0.8 mm). Corpus bursae small, globular. Signum present with sclerotized transverse fold.

Differential diagnosis. Clearly differing from all congeners in the white-marked forewing veins.

Genetic data. BIN: BOLD:AAF8221. Intraspecific variation low: 0.8% (n=3). Nearest neighbour in Ethiopia: *P. trematerrai* **sp. n.** (4.1%).

Remarks. In the structure of the valva (despite great differences in wing coloration) reminiscent of *Prasinocyma trematerrai* **sp. n.**, and *P. tricolorifrons* (see above).

The *bifimbriata* species-group

Six species in Ethiopia. In an analysis of COI sequences, these species appear as a natural group with certain affinities to the genus *Thalassodes*, especially when excluding the third codon position. When analytically considering all nucleotides of the COI gene, *P. bifimbriata*, *P. angulifera* **sp. n.**, and *P. stefani* **sp. n.** constitute a homogenous subgroup, whilst *P. albisticta*, *P. gemmifera* **sp. n.** and *P. discipuncta* **sp. n.** belong to another subgroup, possibly embracing also *P. niveisticta* Prout, 1912, *P. salutaria* (Swinhoe, 1904), *P. camerunalta* (Herbulot, 1986), and *P. bilobata* Fletcher, 1978. In male genitalia the valva does not show a sclerotized harpe, the juxta is often V-shaped and with posterior appendages, the saccus often large. The aedeagus is usually long and slender, with a fine spinulose crest. Sternum A8 is membranous and with tapering projections posteriorly. In male genitalia of some species (*P. bifimbriata*, *P. angulifera* **sp. n.**) the sclerotized V-shaped juxta is reminiscent of the equivalents in African species of the genus *Thalassodes*, as well as the dorsal projection from 1/2 costa of valva. Moreover in habitus the lacking irroration, the pale fringe and the angled hindwing is similar to equivalents in *Thalassodes*. However, the vestigial socii and distinctly bilobous sternum A8 in male genitalia are characteristic for the genus *Prasinocyma* and the molecular data justify their placement in *Prasinocyma* (see above) as this was also recognized in traditional taxonomy (Prout 1930; Scoble 1999) in the case of several species (*P. niveisticta* Prout, 1912, *P. salutaria* (Swinhoe, 1904), *P. bilobata* Fletcher, 1978, *P. bifimbriata*, *P. albisticta* and others) belonging to this group.

Prasinocyma camerunalta (Herbulot, 1986), **comb.n.**

Thalassodes camerunalta Herbulot (1986): 125. Locus typicus: Cameroon: Bafout N'Guemba Forest, 9km SE of Bamenda, 2080m (Holotype ♂ ZSM/Herbulot, examined). Herewith transferred from genus *Thalassodes* (Scoble 1999).

Material. Type series including holotype, see above.

Remarks. In habitus much resembling the following species, for differential diagnosis see there. In habitus the angled hindwings and pale fringe seem to justify a placement in genus *Thalassodes*. Nevertheless, the species is transferred from genus *Thalassodes* to *Prasinocyma* here, because of the genetic (COI) similarity with *P. angolica*, *P. niveisticta* Prout, 1912 and *P. salutaria* and because of common morphological features such as vestigial socii and distinctly bilobous sternum A8 (see also above the remarks to the *bifimbriata* species-group).

Prasinocyma bifimbriata Prout, 1930

(Figs 37, 76, 104)

Prasinocyma bifimbriata Prout (1930): 157. Locus typicus: South Africa: Transvaal, Three Sisters (Holotype ♀ TMP Pretoria).

Material. Oromia: 1♂11♀, Sidama (locality no. 11; BC ZSM Lep 45466, 45467, 81818; gen.prp. ZSM G 19412, 19418, 19466); 2♀, Agere Maryam (no. 48); 4♀, Finchawa (no. 61); 1♀, Sidama (no. 50); 2♀, Sidama (no. 96; BC ZSM Lep 84767, 84768); 1♀, Aluweya (no. 51). **Southern Nations:** 2♂1♀, Arba Minch (no. 24; BC ZSM Lep 13187, 13188; gen.prp. ZSM G 19413); 1♂, Arba Minch (no. 26; BC ZSM Lep 13189; gen.prp. ZSM G 19452).

Redescription. Adult (Fig. 37). Wingspan. Male and female 18–22 mm. Ground colour warm leaf green, without pale irroration. Forewing without spot at 1/2 of the inner margin. Small dark green discal dots and a black terminal line on all wings. Fringe yellowish white. Hindwing termen very slightly angled at M3. Length of male palpi 1.0–1.2 times diameter of eye, pale ochre, tip concolorous. Length of female palpi 1.7–2.0 times diameter of eye. Frons pale brown. Antennae bipectinate in male, filiform in female. Antennal branches ochre, darker at base. Male frenulum weak and short. Male hindtibia with four spurs, without pencil.

Male genitalia (Fig. 76). Uncus stout, short. Socii vestigial. Saccus very long. Valva broad with ventral margin strongly bulbed at 1/3 and with small subapical ventral lobe. Costa of valva with a basal membranous process and a small digitiform process at 1/2, usually bent ventrad. Juxta developed as V-shaped ‘pocket’, reminiscent of equivalents in genus *Thalassodes*. Aedeagus long (2.4–2.55 mm) and narrow, with a long, lateral, spinulose ridge. Sternum A8 with two membranous, rounded projections, with a deep central notch.

Female genitalia (Fig. 104). Sterigma not sclerotized. Antrum slightly sclerotized, cup-shaped. Ductus bursae membranous. Corpus bursae membranous, elongate pyriform. Signum oval, with sclerotized, longitudinal fold. Female genitalia of Ethiopian populations well matching those of an examined slide from South Africa (NHM).

Differential diagnosis. In habitus very similar to *P. bilobata* Fletcher, 1978, the latter, however, in male genitalia clearly differing in the small saccus and the stout, long dorsal spine from costa of valva.

Genetic data. BIN: BOLD:AAK2813. On BOLD three genetically identic specimens from South Africa, Zimbabwe and Rwanda. Intraspecific variation low: 0.18% (n=7). Nearest neighbour in Ethiopia: *P. gemmifera* (4.2%). Genetically not far from *P. angulifera* (6.5%), *Prasinocyma niveisticta* Prout, 1912 barcoded from Kenya, Cameroon, Bioko (6.5%) and *P. salutaris* barcoded from Kenya (7.1%). *Lophorrhachia rubricorpus* at a distance of 7.7%.

Remarks. For generic combination see remarks to the preceding species and to the *bifimbriata* species-group. Prout (1930) generally records this species for "Abyssinia".

Prasinocyma angulifera sp. n.

(Figs 38, 77, 105)

Holotype. 1♂, C. Ethiopia, Oromia, southern Bale Mts, Haremma Forest, 2385m, 6.7139°N, 39.7268°E, 28.XII.2013–10.I.14, D. Wiersbowski (BC ZSM Lep 81482; gen.prp. G 19527)

Paratypes. Oromia: 6♂1♀, C. Ethiopia, Oromia, southern Bale Mts, Haremma Forest, 2385m, 6.7139°N, 39.7268°E, 28.XII.2013–10.I.14, D. Wiersbowski (BC ZSM Lep 81478; gen.prp. G 19526); 2♀, C. Ethiopia, Oromia, Southern Bale Mts, Haremma Forest, Katcha clearing, 1810m, 6.6167°N–39.7782°E, 21.II.–7.III.2014, D. Wiersbowski; 1♂, Ethiopia, Oromia Region, sw Shewa Zone, Wenchi Crater Lake [8.781° N 37.891°E], 2900m (lux) 19.IV.2009, leg. A. Sciarretta, G. Spina (gen.prp. DAEF GI1); 3♂1♀, Ethiopia, Bale mountains, Haremma Forest Karcha Camp 2350m (lux) 20.II.2010, leg. F. Parisi, A. Sciarretta, coll. DAEF (BC ZSM Lep 81814; gen.prp. DAEF GC, GF1); 1♂, Ethiopia, Bale mountains, Haremma Forest 1800m (lux) 22.II.2010, leg. F. Parisi. A. Sciarretta, coll. DAEF (gen.prp. DAEF GD).

Description. Adult (Fig. 38). Wingspan. Male and female 23–26 mm. Ground colour leaf green, with slight bluish tinge, without pale irroration. Forewing costa and fringe whitish. Forewing with small white spot at 1/2 of the inner margin. Minute black discal dot on forewing, absent from hindwing. Hindwing termen angled at M3. Male frenulum present, but very weak. Abdomen with a dorsal row of small white dots. Length of male palpi 1.3–1.8 times diameter of eye, tip and upperside ochre, underside white. Length of female palpi 2.0–2.5 times diameter of eye. Frons brown, irrorated with green scales. Antennae bipectinate in male, filiform in female. Antennal branches ochre. Male hindtibia with white pencil, four spurs and large projection at tip, covering half of first tarsomere.

Male genitalia (Fig. 77). Uncus long, narrow, tapering. Socii very short. Saccus round, comparatively short. Valva membranous, without sclerotized processes, at base with coremata. Juxta with two long posterior processes, dilated and rounded at tip. Aedeagus sigmoid, long (1.85–2.0 mm) and narrow, with long, finely spinulose ridge. Sternum A8 with two large membranous triangular projections, with a V-shaped deep notch at centre.

Female genitalia (Fig. 105). Sterigma membranous, with concentric furrows around ostium bursae. Ductus bursae long (1.4–1.7 mm) and narrow, slightly sclerotized in the last third towards the slightly dilating, funnel-shaped antrum. Corpus bursae elongate (1.8–2.0 mm), oval, membranous, signum absent.

Differential diagnosis. Differing from *P. camerunalta* in ground color more bluish, fringe white, hindwing termen angled, and in the white dorsal dots on the abdomen. In the shape of juxta (with long posterior processes, dilated and rounded at tip) very similar to *P. camerunalta*, but differing in the sternum A8 with longer and more tapering projections, sacculus not dilated and without digitiform process. For differential features from *P. stefani* sp. n. see following species.

Genetic data. BIN: BOLD:ACM0322. Nearest neighbour in Ethiopia: *P. stefani* (2.3%). Genetically not far from *P. bifimbriata* (6.5%), distance from *P. albisticta* 8.1%.

Etymology. The name refers to the angled hindwing termen; latin angulifera = angled.

Remarks. For the generic assignment see remarks to *P. camerunalta* and to the *bifimbriata* species-group.

***Prasinocyma stefani* sp. n.**

(Figs 39, 78, 106)

Holotype. ♂, Äthiopien [Ethiopia, Southern Nations], Ostafrikanischer Graben, Provinz South Nations, Bonga, 12km E, 2414m, 07°17.652' N 36.22.567' E, 23.VI.2014, Beck, R. & G. Riedel (BC ZSM Lep 84752; gen.prp. ZSM G 16066).

Paratypes. Southern Nations: 1♂2♀, id. (gen.prp. ZSM G 16069); **Oromia:** 1♀, Ethiopia, Bale mountains, Harennä Forest Karcha Camp 2350m (lux) 20.II.2010, leg. F. Parisi. A. Sciarretta, coll. ZSM (BC ZSM Lep 81815; gen.prp. ZSM G 16069); 1♀, Äthiopien [Ethiopia], Bale Mountains, Reg. Sidamo Kifle Hager, Catcha nr. Rira, 2350m, 06°42.899' N 39.43.441' E, 07.IV.2010, Dietl, Monika + Michael, R. Beck, H. Belkele leg. (BC ZSM Lep 84763).

Description. Adult (Fig. 39). Wingspan. Male and female 24–26 mm. Very similar to the preceding species. Ground colour leaf green, without pale irroration. Forewing without spot at the inner termen. Fore- and hindwings with minute black discal dot. Terminal line dark grey, fringe whitish. Hindwing termen slightly angled at M3. Male frenulum present, but very weak. Abdomen with a dorsal row of small white dots. Length of male palpi 1.3–1.4 times diameter of eye, tip and upperside ochre, underside white. Length of female palpi 2.2 times diameter of eye. Frons brown. Antennae bipectinate in male, filiform in female. Antennal branches ochre. Male hindtibia with white pencil, four spurs and large projection at tip, covering half of first tarsomere.

Male genitalia (Fig. 78). Uncus long, narrow, tapering. Socii very short. Saccus round, comparatively short. Valva membranous, without sclerotized processes, at base with coremata. Juxta with two long posterior processes, dilated and rounded at tip. Aedeagus sigmoid, long (1.8–1.9 mm) and narrow, with long, finely spinulose ridge. Sternum A8 with two large, comparatively narrow, membranous projections, with a V-shaped deep notch at centre.

Female genitalia (Fig. 106). Lamella postvaginalis membranous, wrinkled around ostium bursae. Sterigma membranous, with concentric furrows around ostium bursae. Ductus bursae long (1.4 mm) and narrow, sclerotized at the forceps-shaped antrum. Corpus bursae elongate (1.5 mm), oval, membranous, signum absent.

Differential diagnosis. Sister species *P. angulifera* sp. n. differing in the somewhat longer uncus, the more pronounced sclerite at the tip of sacculus, projections of sternum A8 slightly narrower. In female genitalia antrum funnel- rather than forceps-shaped. Male palpi somewhat shorter, in the other external characters (wing shape and coloration) indistinguishable from *P. angulifera* sp. n. *Thalassodes albifimbria* Warren, 1897 (locus typicus Malawi; in Scoble 1999 combined with *Thalassodes*; in Prout 1930 with *Hemistola*) according to Prout (1930: 43, fig. 4i) without male frenulum, more yellowish green, hindwing less angled, wings with diffuse transverse fascia.

Genetic data. BIN: BOLD:AAF8209. The BIN includes three further, conspecific specimens from Tanzania (at a distance of only 0.46%). Nearest neighbour in Ethiopia: *P. angulifera* sp. n. (2.3%).

Remarks. For the generic assignment see remarks to *P. camerunalta* and to the *bifimbriata* species-group.

***Prasinocyma albisticta* (Warren, 1901)**

(Figs 40, 79, 107)

Antharmostes? *albisticta* Warren (1901): 205. Locus typicus: Uganda: Nandi Country, Rau (Holotype ♂ NHM, examined).

Material. Oromia: 1♂1♀, Agere Maryam (locality no. 48; BC ZSM Lep 85814; gen.prp. ZSM G 19643, 15902).

Southern Nations: 1♀, Mago NP (no. 96; BC ZSM Lep 84760, gen.prp. ZSM G 15908); 1♀, Äthiopien, Bonga Hotel, 24.VI.2014, 1720 m, 7.27407, 36.2462, leg. Riedel G. & R. Beck (BC ZSM Lep 86024).

Redescription. Adult (Fig. 40). Wingspan. Male and female 22–26 mm. Ground colour leaf green, without pale irroration. Forewing with small white spot at 1/2 of the inner margin. Small black discal dots on all wings. Conspicuous white terminal dots present on all wings, sometimes larger and triangular. Fringe darker, slightly chequered. Hindwing termen slightly angled at M3. Length of male palpi 1.7 times diameter of eye, tip and upperside palpi pale brown, underside white. Length of female palpi 1.9–2.2 times diameter of eye. Frons brown, irrorated with green scales. Antennae bipectinate in male, filiform in female. Antennal branches ochre. Male frenulum present.

Male genitalia (Fig. 79, identic to those of the examined holotype). Uncus comparatively long. Socii vestigial. Saccus small, narrow. Juxta with one very long sclerotized, tapered process. Costa of valva with a broad, slightly sclerotized dorsal process, tapering at tip. Aedeagus narrow, 'forked', with a long lateral process, total length 1.4 mm. Sternum A8 with two membranous, triangular projections and a V-shaped notch between.

Female genitalia (Fig. 107). Lamella postvaginalis sclerotized, oval, smooth. Lamella antevaginalis sclerotized, reniform, slightly corrugate. Antrum cylindrical (hut-shaped), furrowed. Ductus bursae very narrow, sclerotized in the posterior half. Corpus bursae elongate oval, membranous, with corrugate appendix bursae at junction with ductus bursae. Signum absent.

Differential diagnosis. In habitus similar to the West-African *P. gemmatimargo* Prout, 1915 with subsp. *prouti* Debauche, 1941 described from Democratic Republic of the Congo, but in *P. albisticta* the wing colour is darker green, the irroration absent, discal dots more conspicuous, white terminal dots extended. An examined male syntype (NHM) of *P. hadrata* (Felder & Rogenhofer, 1875) from South Africa also similar in habitus, but here the discal dots are absent, the terminal dots more isolated and bordered by reddish fringe.

Genetic data. BIN: BOLD:AAP2177, one further specimen with identic sequence from Kenya. Nearest neighbours in Ethiopia: *P. bifimbriata* (6.4%), *P. gemmifera* (6.9%), *P. discipuncta* (7.8%).

Remarks. For the generic assignment see remarks to *P. bifimbriata* and to *bifimbriata* species-group. Despite some very unusual traits in male genitalia (process of juxta, dorsal appendage of valva, forked aedeagus) the genetic similarity to *P. bifimbriata* confirms the generic combination with *Prasinocyma*, as it had been postulated earlier by Prout (1930).

Prasinocyma gemmifera sp. n.

(Figs 41, 108)

Holotype. ♀, Äthiopien [Ethiopia, Southern Nations], Ostafrikanisches South Nation, Wushwush 7,4 km w, 1910m, 07°18'16.05"N [07.304 N 36.057 E], 7.V.2013, Beck R. & R. Wanninger leg. (BC ZSM Lep 78487; gen.prp. ZSM G 19663).

Paratypes. Southern Nations: 1♀, id. (BC ZSM Lep 78483; gen.prp. ZSM G 16265); 1♀, Kumba Forest, 5km W Wushwush, 1890m, 15.–25.IV.2014, leg. D. Wiersbowski.

Description. Adult (Fig. 41). Wingspan. Female 26–27 mm. Ground colour leaf green, without pale irroration. Forewing with small white spot at 1/2 of the inner margin. Small black discal dots on all wings. White, triangular terminal dots at vein endings of all wings, separated from the green ground colour by a very fine dark line. Fringe darker, slightly chequered. Hindwing termen slightly angled at M3. Length of female palpi 1.9–2.1 times diameter of eye, length of last segment 0.7–0.8 mm, tip and upperside palpi pale brown, underside white. Frons pale brown. Antennae filiform in female. Female hindtibia with four spurs.

Female genitalia (Fig. 108). Apophyses fine and short. Sterigma slightly sclerotized, sub-rhomboid. Ductus bursae very narrow. Corpus bursae elongate oval, posterior half at both sides strongly spinose.

Differential diagnosis. Larger than *P. albisticta* and *P. discipuncta* sp. n., in wing coloration and external structure very similar to the former, but in genitalia strongly differing in the poor sclerotization of the sterigma and in the strongly spinose corpus bursae. Differential features from *P. discipuncta* sp. n. see under the following species.

Genetic data. BIN: BOLD:AAU2575, further specimens with identic sequence from Tanzania, Cameroon and Ghana. Nearest neighbours in Ethiopia: *P. bifimbriata* (4.2%), *P. discipuncta* sp. n. (4.4%). Genetically not far from *P. salutaris* (Swinhoe, 1904) (4.0%), distance from *P. albisticta* 6.9%, from *P. niveisticta* Prout, 1912 7.6%.

Prasinocyma discipuncta sp. n.

(Figs 42, 109)

Holotype. 1♀, S. Ethiopia [Southern Nations], Sidamo, 16 km, SW Kibre Mengist, 1700m, 5.8107°N 38.8880°E, 25–26.III.2009, leg. R. Beck, M. Dietl (BC ZSM Lep 85813; gen.prp. ZSM G 15901).

Description. Adult (Fig. 42). Wingspan. Female 23 mm. Ground colour leaf green, without pale irroration. Forewing with very small white spot at 1/2 of the inner margin. Black discal dots conspicuous on all wings. White, triangular terminal dots at vein endings of all wings. Fringe darker, slightly chequered. Hindwing termen slightly angled at M3. Length of female palpi 2.1 times diameter of eye, length of last segment 0.7 mm, tip and upperside palpi pale brown, underside white. Frons pale brown. Antennae filiform in female. Female hindtibia with four spurs.

Female genitalia (Fig. 109). Sterigma (lamella ante- and postvaginalis) fused to a round sclerite. Ductus bursae very narrow. Corpus bursae large, oval, membranous. Signa developed as conspicuous, paired, large, spinose crests.

Differential diagnosis. Smaller than *P. gemmifera* **sp. n.** From both *P. gemmifera* **sp. n.** and *P. albisticta* differing in the more conspicuous discal dots, moreover in *P. discipuncta* **sp. n.** the triangular terminal dots are not separated from the green ground colour by a dark line. In female genitalia *P. gemmifera* **sp. n.** differs from *P. discipuncta* **sp. n.** in the different shape of the sterigma and in the much stronger spinose corpus bursae. In habitus somewhat reminiscent of the examined type specimen of *P. salutaris* (Swinhoe, 1904) (described as *Thalassodes* from Uganda), but the latter with triangular terminal dots less conspicuous and in female genitalia without signa.

Genetic data. BIN: BOLD:ABA3724, one further specimen with identic sequence from Sierra Leone. Nearest neighbour in Ethiopia: *P. gemmifera* (4.4%). Genetically not far from *P. salutaris* (6.5%), distance from *P. albisticta* 7.8%, from *P. niveisticta* 8.5%.

Checklist of Ethiopian *Prasinocyma* species

Subfamily Geometrinae

Tribe Hemistolini Inoue, 1961

Genus *Prasinocyma* Warren, 1897

The *immaculata* species-group

Prasinocyma immaculata thiaucourti Herbulot, 1993, stat. n.

Prasinocyma pedicata aethiopica **subsp. n.**

Prasinocyma angolica pseudopedicata **subsp. n.**

Prasinocyma bongaensis **sp. n.**

Prasinocyma pumilata Fletcher, 1956

Prasinocyma tranquilla Prout, 1917

Prasinocyma getachewi **sp. n.**

Prasinocyma baumgaertneri **sp. n.**

Prasinocyma oblita Prout, 1930

Prasinocyma hailei Debauche, 1937

Prasinocyma perpulverata Prout, 1916

The *nereis* species-group

Prasinocyma nereis Townsend, 1952 (comb.n.)

Prasinocyma shoa Herbulot, 1993

Prasinocyma shoa yabellensis **subsp. n.**

Prasinocyma robusta **sp. n.**

Prasinocyma amharensis **sp. n.**

Prasinocyma jefferyi Prout, 1930

Prasinocyma monikae **sp. n.**

Prasinocyma corrugata Fletcher, 1958

Prasinocyma fusca **sp. n.**

Prasinocyma leveneorum **sp. n.**

Prasinocyma germinaria (Guenée, 1858)

Prasinocyma magica **sp. n.**

Prasinocyma batesi distans **subsp. n.**

Prasinocyma species (undescribed)

Prasinocyma aquamarina **sp. n.**

Prasinocyma beryllaria **sp. n.**

Prasinocyma lutulenta **sp. n.**

Prasinocyma septentrionalis **sp. n.**

Prasinocyma neglecta Prout, 1921

Prasinocyma gajdacsii Prout, 1930

The *aetheraea* species-group

- Prasinocyma aetheraea* (Debauche, 1937)
Prasinocyma fallax **sp. n.**
Prasinocyma tricolorifrons (Prout, 1913)
Prasinocyma trematerrai **sp. n.**
Prasinocyma trematerrai simienensis **subsp. n.**
Prasinocyma albivenata Herbulot, 1983

The *bifimbriata* species-group

- Prasinocyma bifimbriata* Prout, 1930
Prasinocyma angulifera **sp. n.**
Prasinocyma stefani **sp. n.**
Prasinocyma albisticta (Warren, 1901)
Prasinocyma gemmifera **sp. n.**
Prasinocyma discipuncta **sp. n.**

Acknowledgements

We thank Dr. Robert Beck (Munich), Dr. Vasiliy Kravchenko (Tel Aviv), Dr. Günter Müller (Haifa), Dr. Stefan Naumann (Berlin), Daniel Wiersbowski (Addis Ababa), Günter Riedel (Munich) and Harald Sulak (Munich) who collected numerous Ethiopian geometrids and provided information on the collecting localities. Additional Ethiopian geometrid moths have been provided from the museum in Berlin by the courtesy of Dr. W. Mey and from the private collections Hermann Staude (Magaliesburg, South Africa) and Manfred Sommerer (Munich). We thank Giuseppe Spina (Campobasso) and Alenuccio Palladino (Campobasso) for their help in the collection of moths during the entomological expeditions of the University of Molise in Ethiopia. Harald Sulak, Thomas Witt and, above all, Daniel Wiersbowski gave major impacts in establishing and organizing the project “EIP” (Ethiopian Insects Project). For mounting of moths, dissection of slides, tissue sampling and databasing (DNA Barcoding) we are grateful to Mei-Yu Chen, Clarissa Dieterle, Tommaso Caudullo. We thank John Chainey (London) for access to NHM collections and kind help in digitizing the genitalia slides. The genetic analyses have received considerable support from Paul D. N. Hebert and the Biodiversity Institute of Ontario (BIO) and the Canadian Centre for DNA Barcoding (CCDB University of Guelph). The data management and analysis system BOLD was provided by Sujeevan Ratnasingham. The work was financially supported by Genome Canada (Ontario Genomics Institute) and special grants from Life Technology in the framework of the iBOL program, WG 1.9.

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4



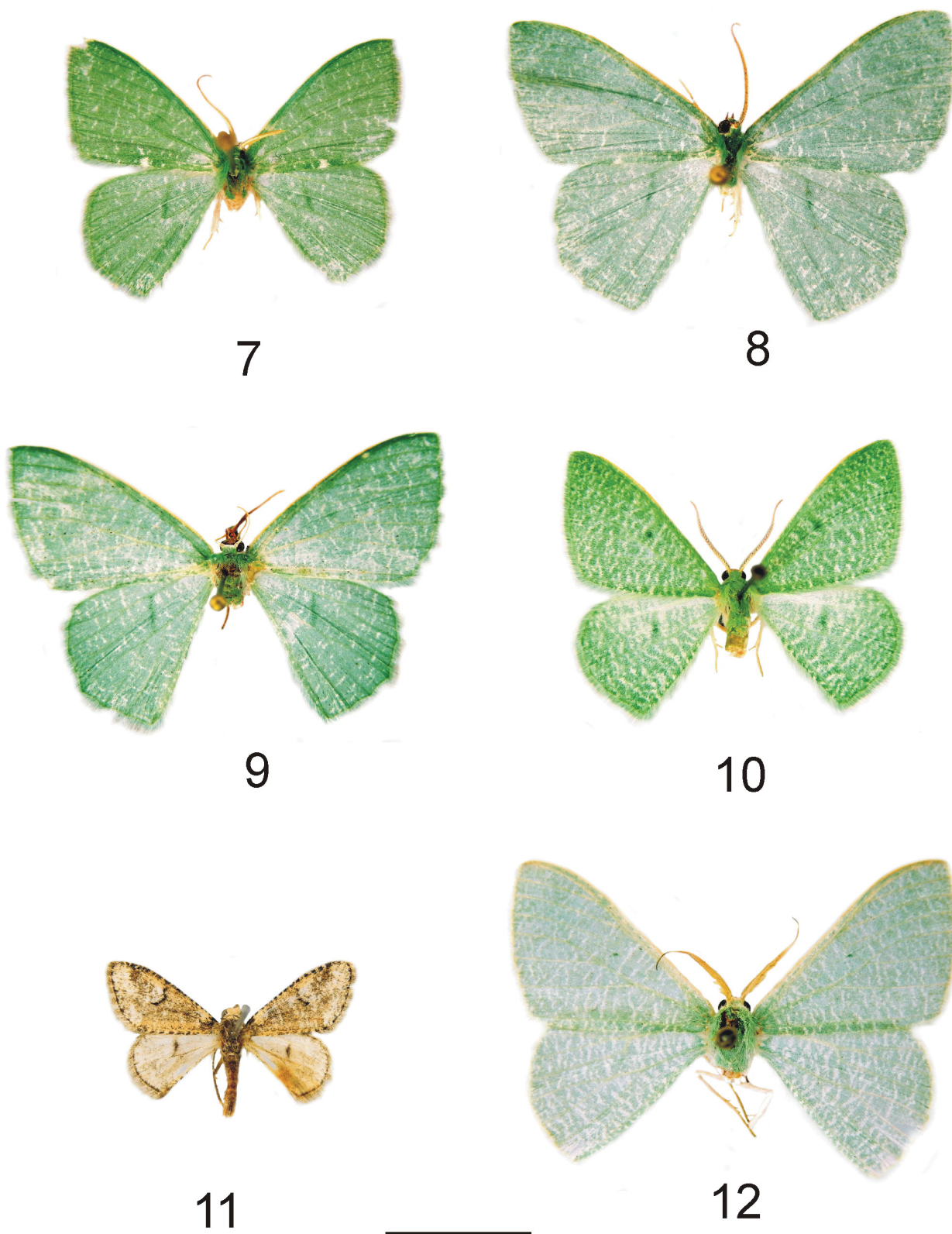
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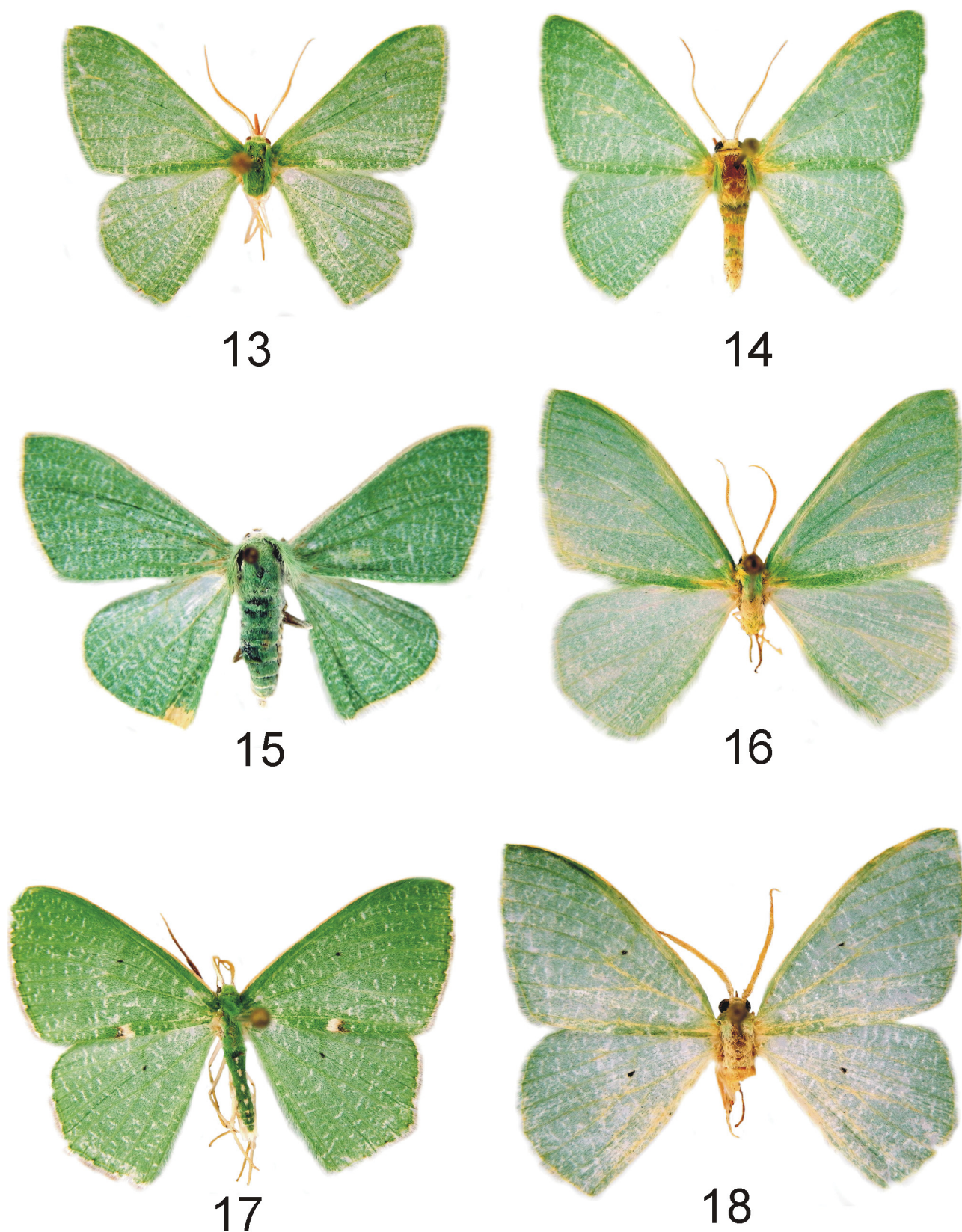
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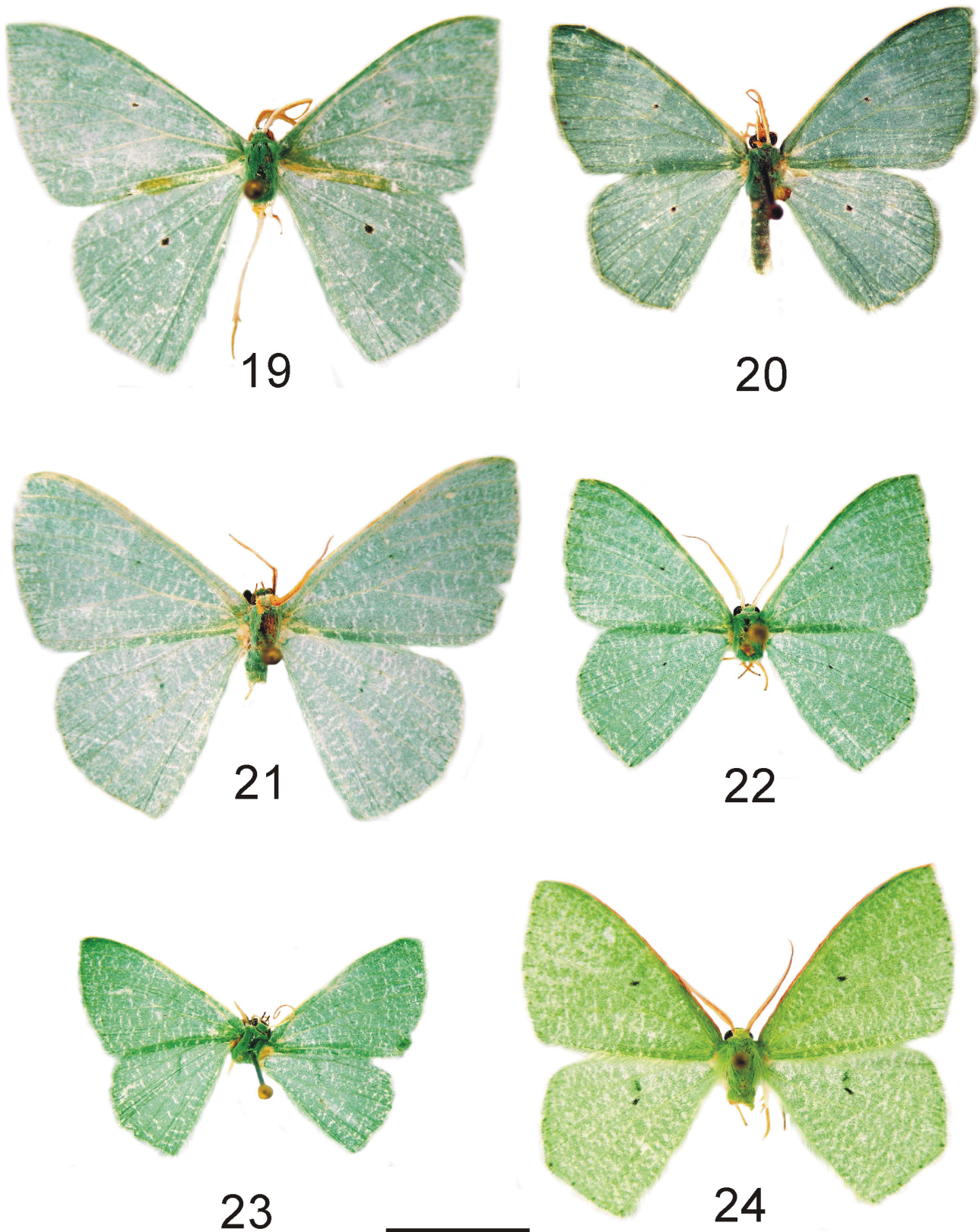
FIGURES 1–6. Adults of Ethiopian *Prasinocyma* species. Scale Bar—1 cm. In parentheses the ID-numbers of genitalia slides, and/or DNA barcoding, and/or nomenclatural status of the illustrated specimen are given. 1. *Prasinocyma immaculata thiaucourti* Herbulot, 1993 (BC ZSM Lep 13171); 2. *Prasinocyma pedicata aethiopica* **subsp. n.** (BC ZSM Lep 45465; Holotype); 3. *Prasinocyma angolica pseudopedicata* subsp. n. (BC ZSM Lep 84181; Holotype); 4. *Prasinocyma bongaensis* **sp. n.** (BC ZSM Lep 84753; Holotype); 5. *Prasinocyma pumilata* Fletcher, 1956 (BC ZSM Lep 78500); 6. *Prasinocyma tranquilla* Prout, 1917 (BC ZSM Lep 85805-84638).



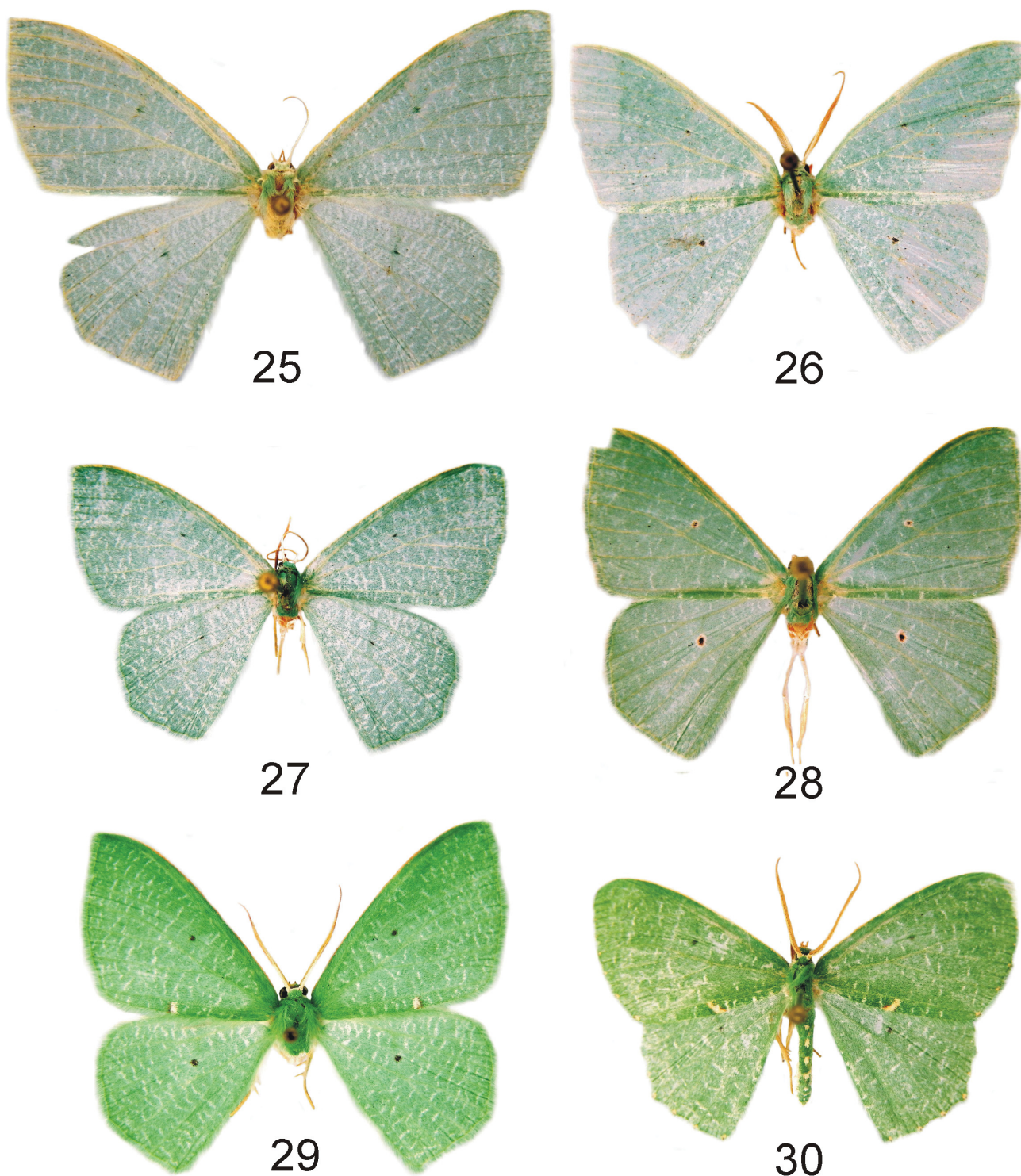
FIGURES 7–12. Adults of Ethiopian *Prasinocyma* species. Scale Bar—1 cm. In parantheses the ID-numbers of genitalia slides, and/or DNA barcoding, and/or nomenclatural status of the illustrated specimen are given. 7. *Prasinocyma getachewi* **sp. n.** (BC ZSM Lep 13169; Holotype); 8. *Prasinocyma baumgaertneri* **sp. n.** (BC ZSM Lep 81479; Holotype); 9. *Prasinocyma oblita* Prout, 1930 (gen.prp. ZSM G 16002); 10. *Prasinocyma hailei* Debauche, 1937 (BC ZSM Lep 85812-83226); 11. *Prasinocyma loveridgei* Prout, 1926 (cf. *perpulverata* Prout, 1916); 12. *Prasinocyma nereis* Townsend, 1952 (comb.n.) (BC ZSM Lep 83221).



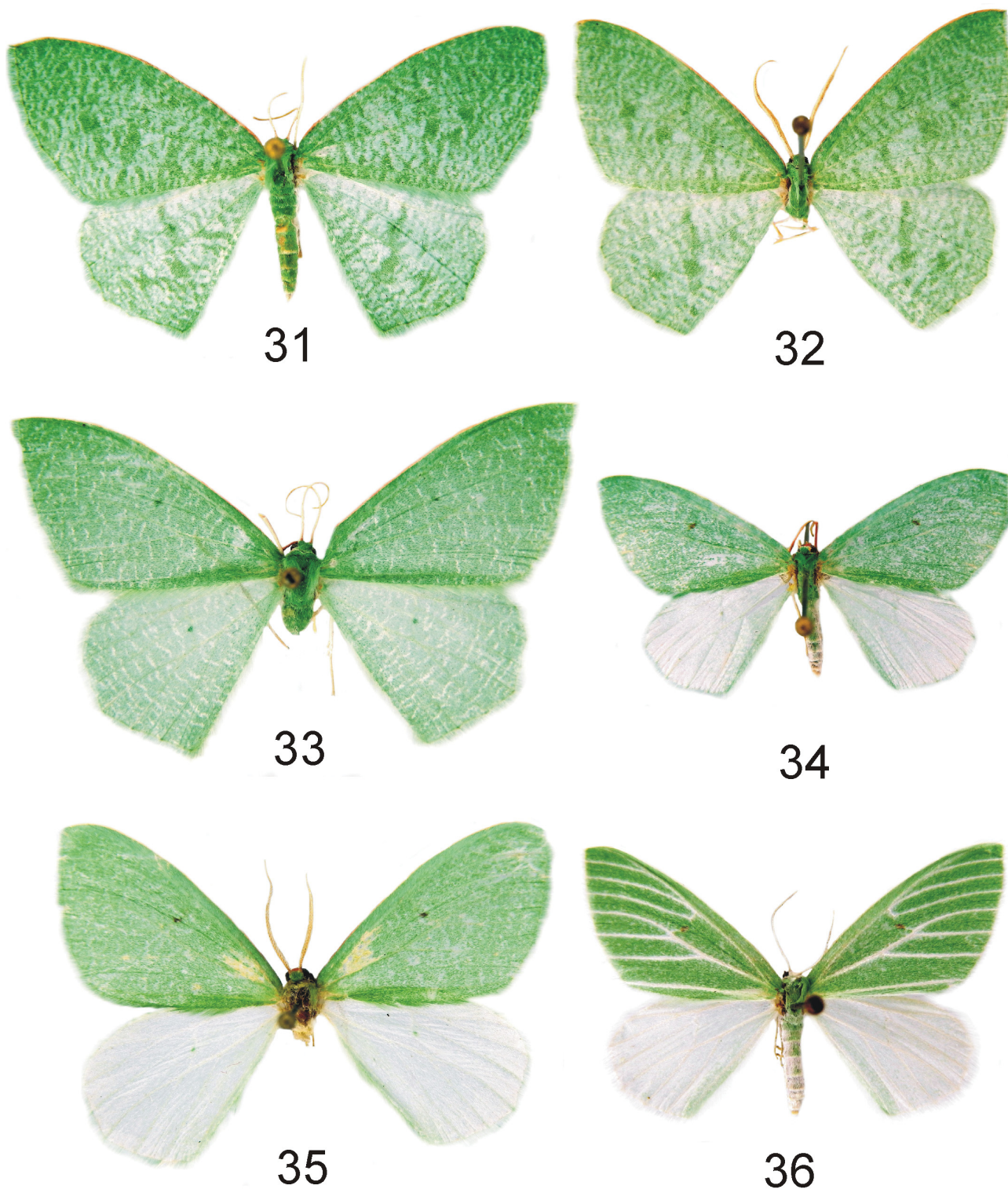
FIGURES 13–18. Adults of Ethiopian *Prasinocyma* species. Scale Bar—1 cm. In parantheses the ID-numbers of genitalia slides, and/or DNA barcoding, and/or nomenclatural status of the illustrated specimen are given. 13. *Prasinocyma shoa* Herbulot, 1993 (gen.prp. ZSM G 19503; Paratype); 14. *Prasinocyma shoa yabellensis* **subsp. n.** (BC ZSM Lep 85819; Paratype); 15. *Prasinocyma robusta* **sp. n.** (BC ZSM Lep 85818; Paratype); 16. *Prasinocyma amharensis* **sp. n.** (BC ZSM Lep 40510; Holotype); 17. *Prasinocyma jefferyi* Prout, 1930; 18. *Prasinocyma monikae* **sp. n.** (BC ZSM Lep 45504; Holotype).



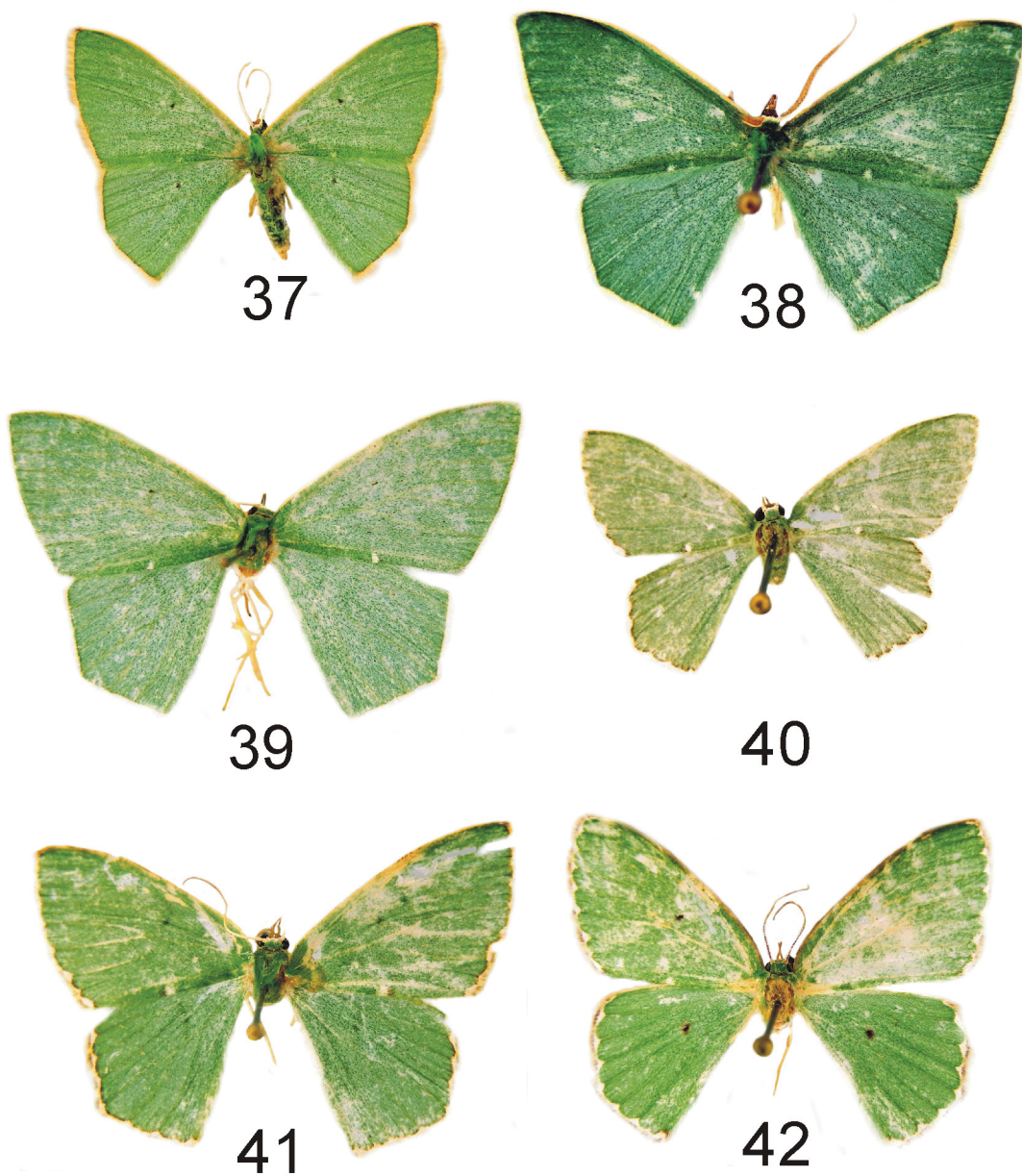
FIGURES 19–24. Adults of Ethiopian *Prasinocyma* species. Scale Bar—1 cm. In parantheses the ID-numbers of genitalia slides, and/or DNA barcoding, and/or nomenclatural status of the illustrated specimen are given. 19. *Prasinocyma corrugata* Fletcher, 1958 (gen.prp. ZSM G 19653); 20. *Prasinocyma fusca* **sp. n.** (BC ZSM Lep 81820; Holotype); 21. *Prasinocyma leveneorum* **sp. n.** (BC ZSM Lep 85808-84634; Holotype); 22. *Prasinocyma germinaria* (Guenée, 1858) (BC ZSM Lep 83222); 23. *Prasinocyma magica* **sp. n.** (gen.prp. ZSM G 16065; Paratype); 24. *Prasinocyma batesi distans* **subsp. n.** (BC ZSM Lep 85806-83224).



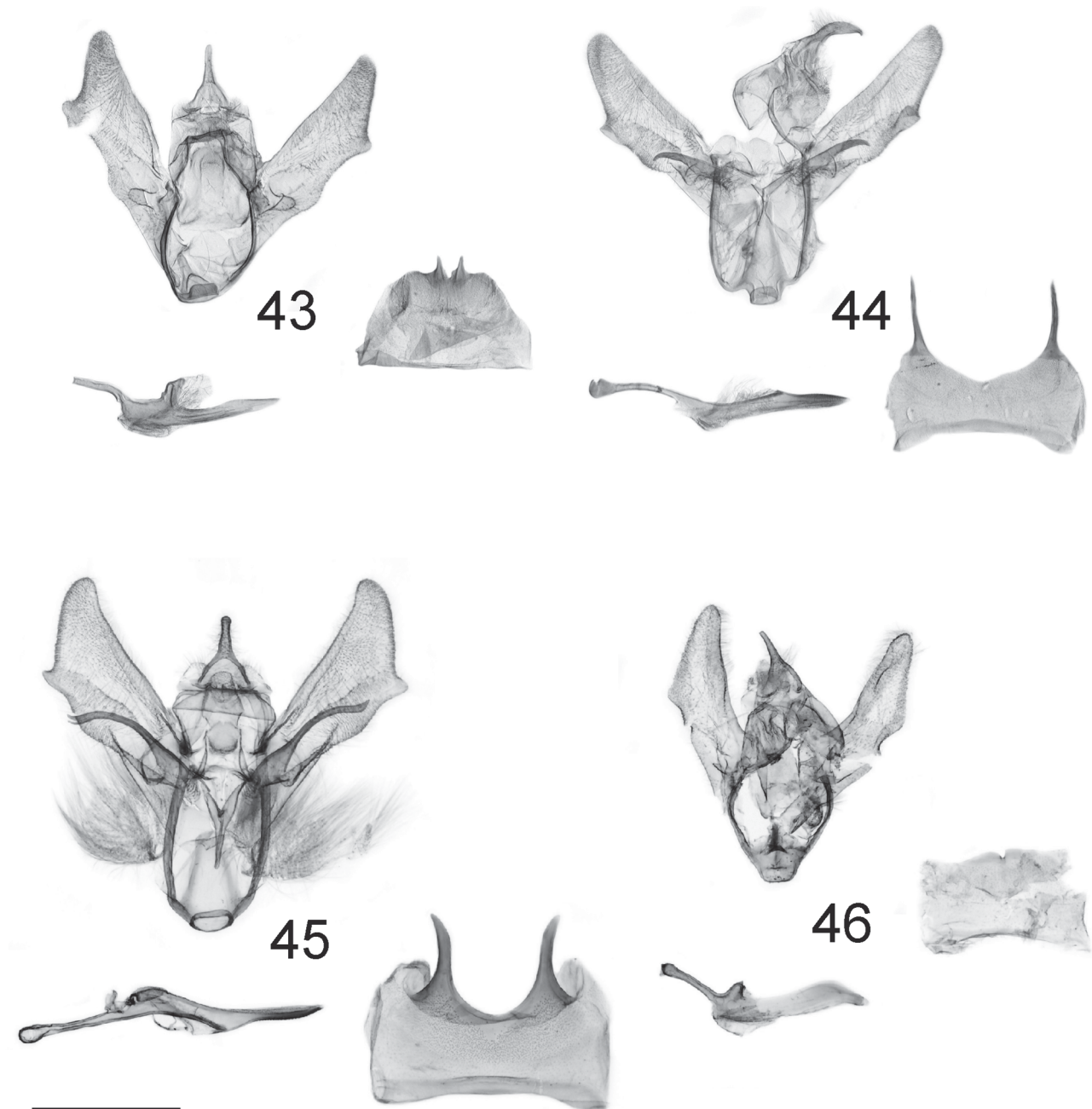
FIGURES 25–30. Adults of Ethiopian *Prasinocyma* species. Scale Bar—1 cm. In parantheses the ID-numbers of genitalia slides, and/or DNA barcoding, and/or nomenclatural status of the illustrated specimen are given. 25. *Prasinocyma aquamarina* **sp. n.** (BC ZSM Lep 26135; Holotype); 26. *Prasinocyma beryllaria* **sp. n.** (BC ZSM Lep 81817; Holotype); 27. *Prasinocyma lutulenta* **sp. n.** (BC ZSM Lep 85809-81481; Holotype); 28. *Prasinocyma septentrionalis* **sp. n.** (BC ZSM Lep 13197; Holotype); 29. *Prasinocyma neglecta* Prout, 1921 (BC ZSM Lep 83223); 30. *Prasinocyma gajdacs* Prout, 1930.



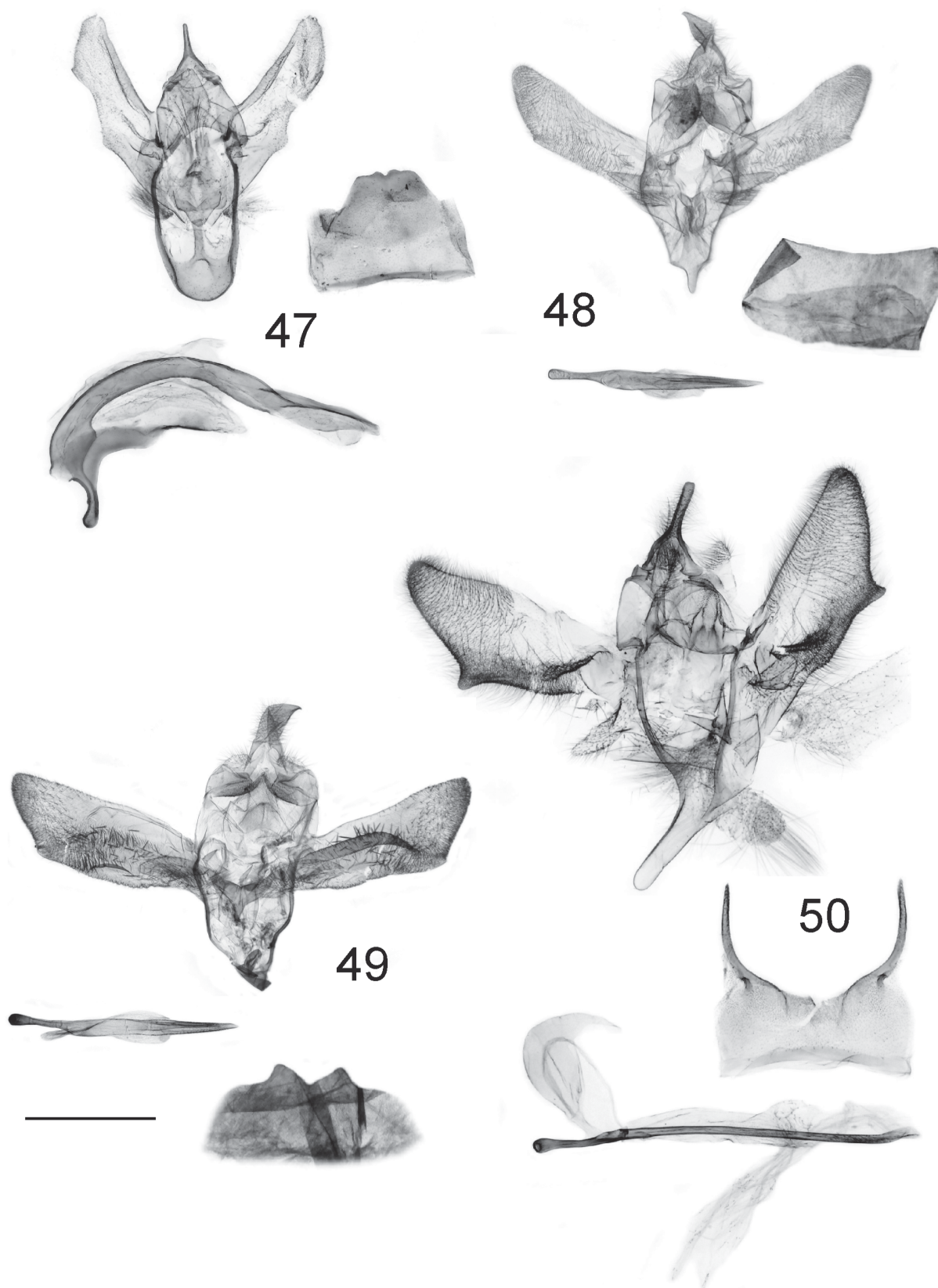
FIGURES 31–36. Adults of Ethiopian *Prasinocyma* species. Scale Bar—1 cm. In parentheses the ID-numbers of genitalia slides, and/or DNA barcoding, and/or nomenclatural status of the illustrated specimen are given. 31. *Prasinocyma aetheraea* (Debauche, 1937) (BC ZSM Lep 81484); 32. *Prasinocyma fallax* **sp. n.** (BC ZSM Lep 40508; Holotype); 33. *Prasinocyma tricolorifrons* (Prout, 1913) (BC ZSM Lep 13203); 34. *Prasinocyma trematerrai* **sp. n.** (Paratype); 35. *Prasinocyma trematerrai simienensis* **subsp. n.** (BC ZSM Lep 83216-85810; Holotype); 36. *Prasinocyma albivenata* Herbulot, 1983 (BC ZSM Lep 76125; Paratype).



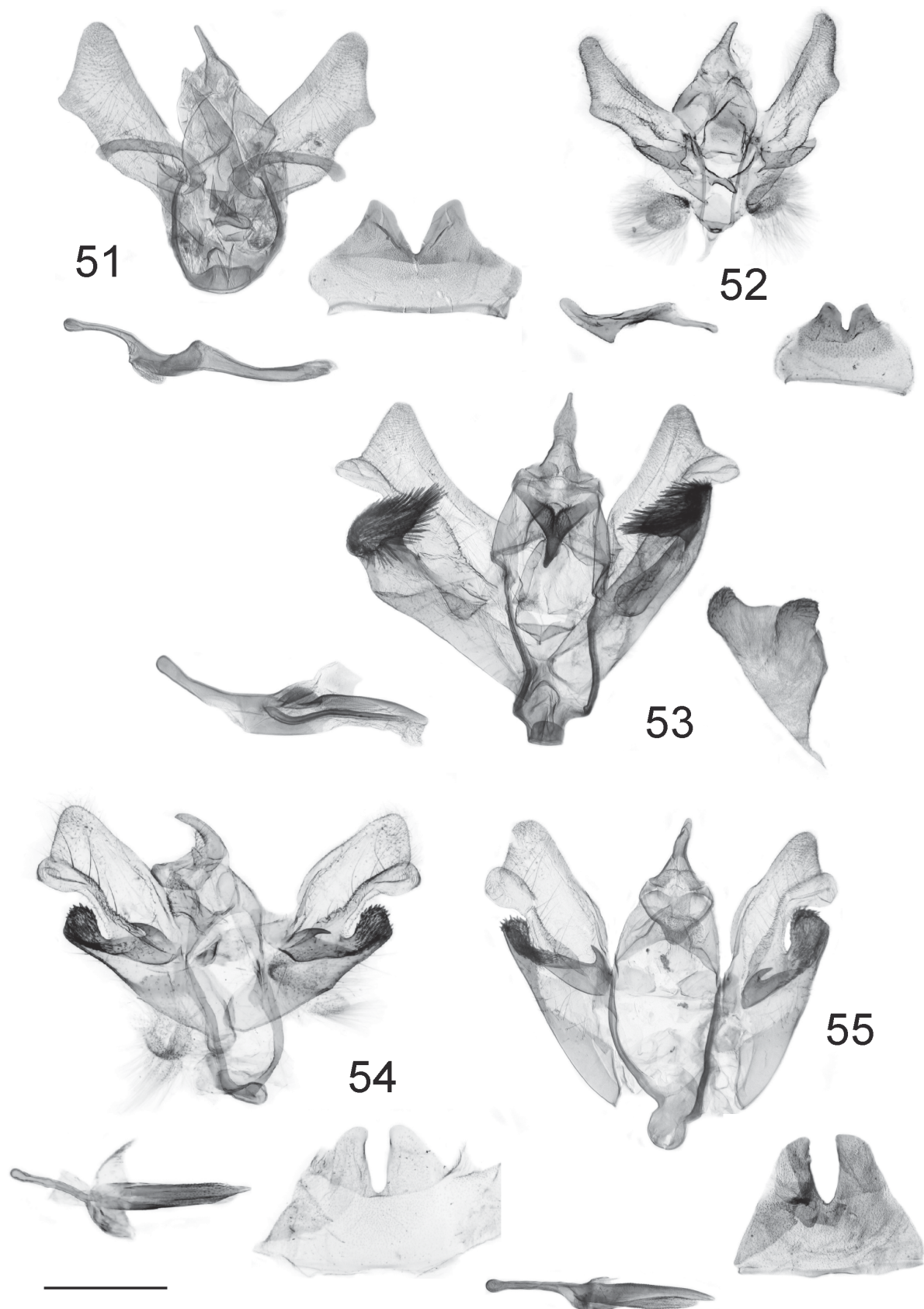
FIGURES 37–42. Adults of Ethiopian *Prasinocyma* species. Scale Bar—1 cm. In parentheses the ID-numbers of genitalia slides, and/or DNA barcoding, and/or nomenclatural status of the illustrated specimen are given. 37. *Prasinocyma bifimbriata* Prout, 1930; 38. *Prasinocyma angulifera* **sp. n.** (BC ZSM Lep 81482; Holotype); 39. *Prasinocyma stefani* **sp. n.** (gen.prp. ZSM G 16069; Paratype); 40. *Prasinocyma albisticta* (Warren, 1901) (BC ZSM Lep 85814); 41. *Prasinocyma gemmifera* **sp. n.** (BC ZSM Lep 78487; Holotype); 42. *Prasinocyma discipuncta* **sp. n.** (BC ZSM Lep 85813; Holotype).



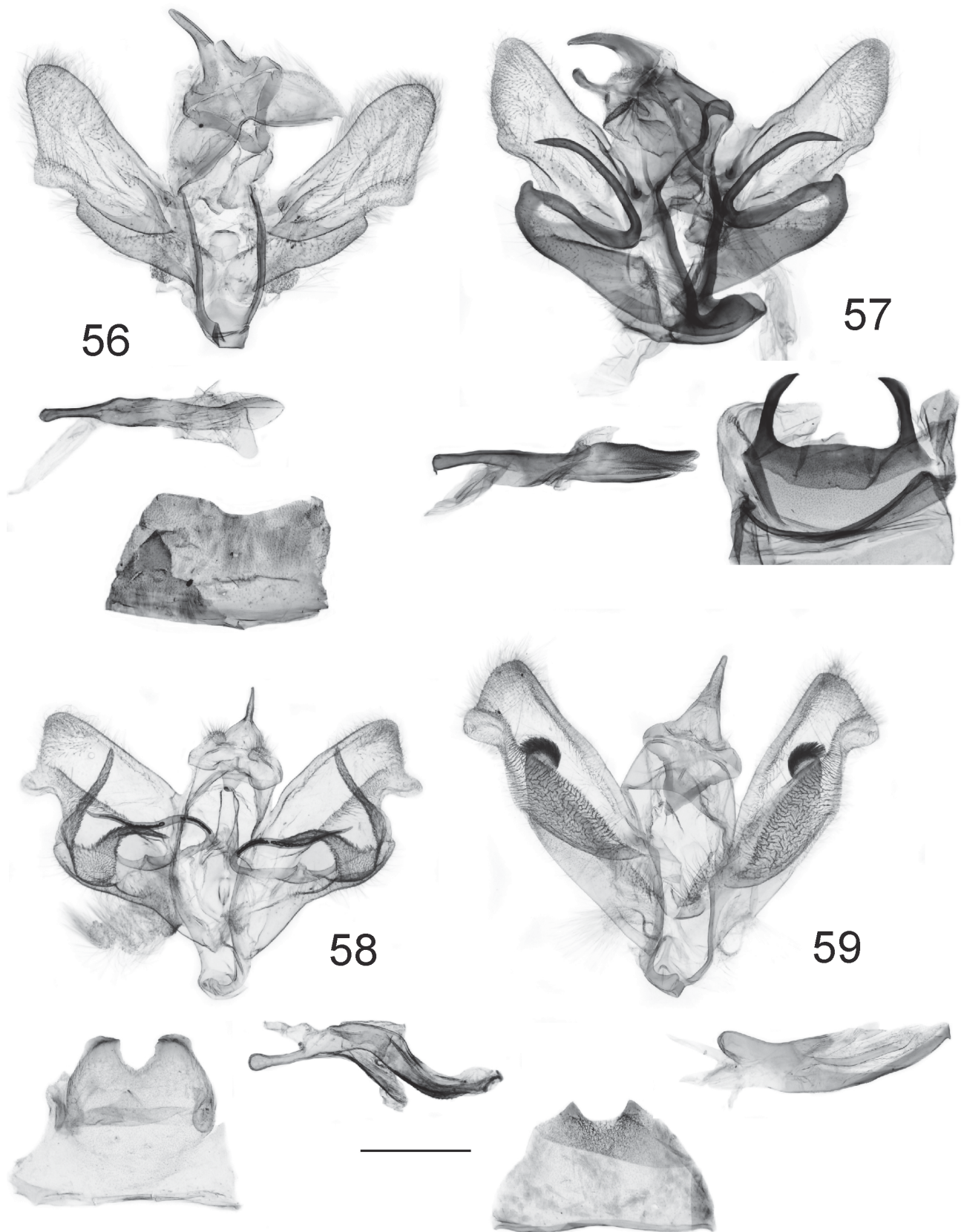
FIGURES 43–46. Male genitalia of Ethiopian *Prasinocyma* species. Scale Bar(s)—1 mm. In parentheses the ID-numbers of genitalia slides are given. 43. *Prasinocyma immaculata thiaucourti* Herbulot, 1993 (gen.prp. ZSM G 19396); 44. *Prasinocyma pedicata aethiopica* **subsp. n.** (gen.prp. ZSM G 19399); 45. *Prasinocyma angolica pseudopedicata* subp. n. (gen.prp. ZSM G 19635); 46. *Prasinocyma pumilata* Fletcher, 1956 (gen.prp. ZSM G 19660).



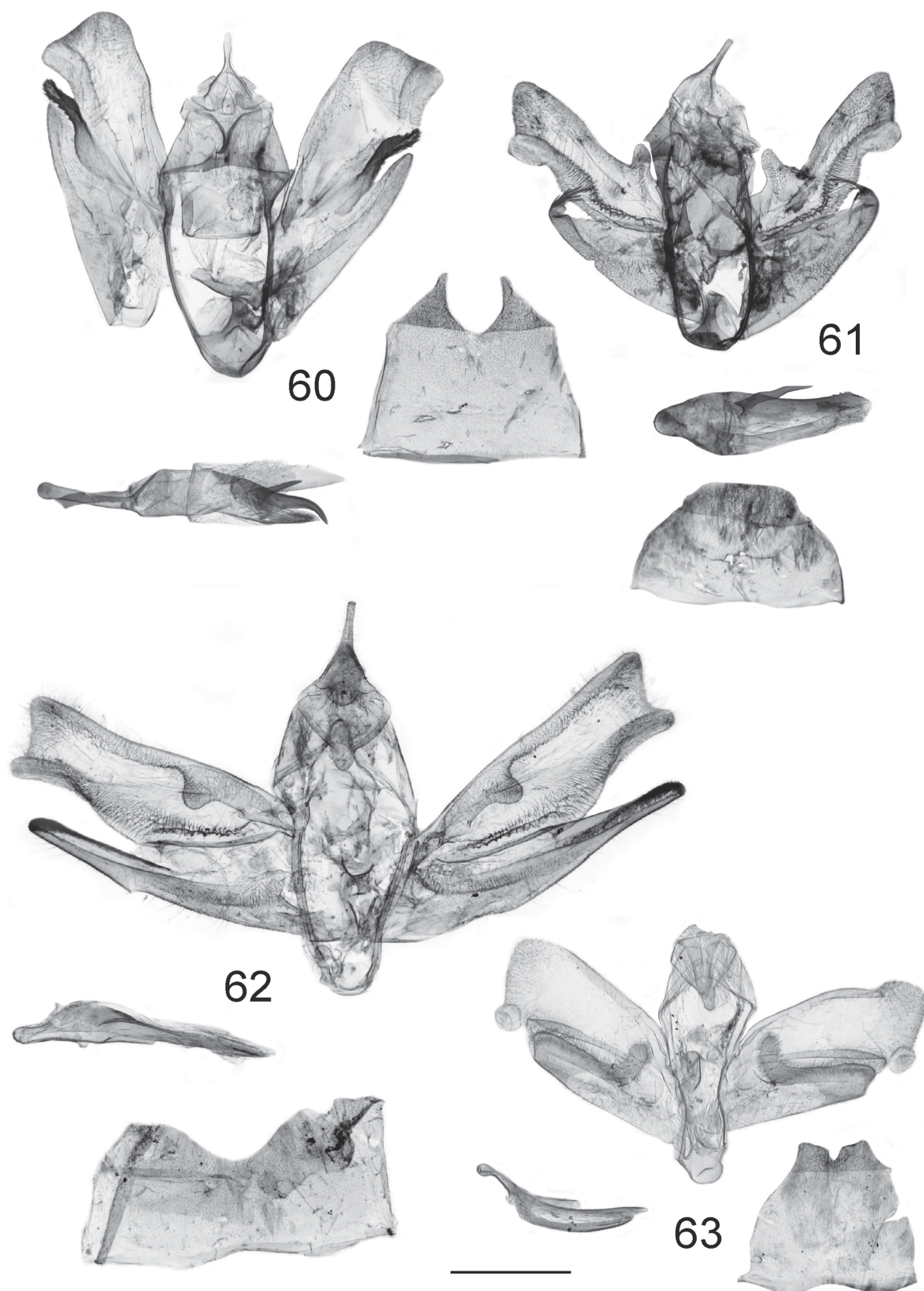
FIGURES 47–50. Male genitalia of Ethiopian *Prasinocyma* species. Scale Bar(s)—1 mm. In parantheses the ID-numbers of genitalia slides are given. 47. *Prasinocyma tranquilla* Prout, 1917 (gen.prp. ZSM G 19642); 48. *Prasinocyma getachewi* **sp. n.** (gen.prp. ZSM G 19398); 49. *Prasinocyma baumgaertneri* **sp. n.** (gen.prp. DAEF GP); 50. *Prasinocyma oblita* Prout, 1930 (gen.prp. ZSM G 16001).



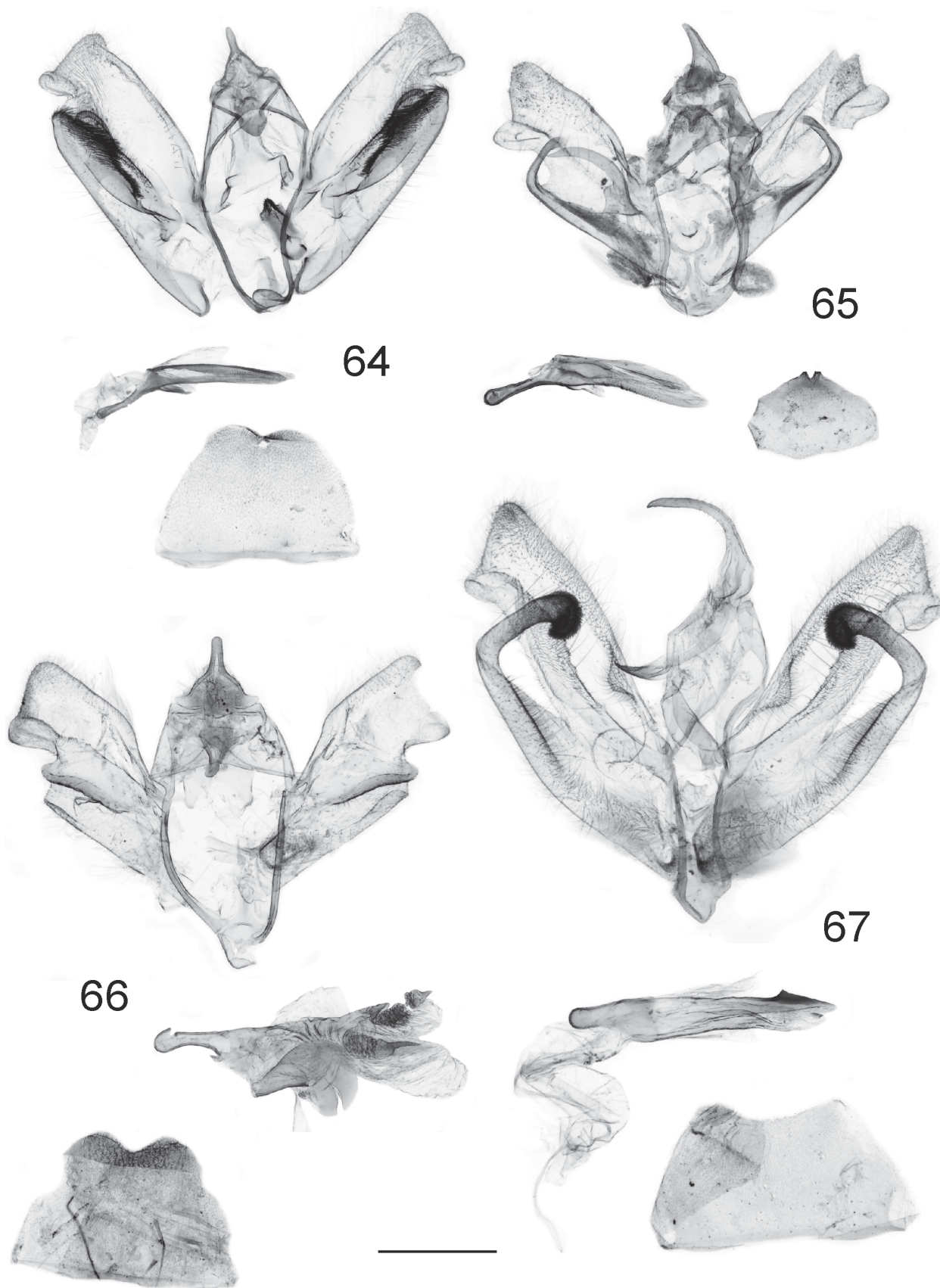
FIGURES 51–55. Male genitalia of Ethiopian *Prasinocyma* species. Scale Bar(s)—1 mm. In parentheses the ID-numbers of genitalia slides are given. 51. *Prasinocyma hailei* Debauche, 1937 (gen.prp. ZSM G 19395); 52. *Prasinocyma loveridgei* Prout, 1926, Kenya (cf. *perpulverata*) (gen.prp. ZSM G 16092); 53. *Prasinocyma nereis* Townsend, 1952 (comb.n.) (gen.prp. ZSM G 19402); 54. *Prasinocyma shoa* Herbulot, 1993 (gen.prp. ZSM G 16246); 55. *Prasinocyma shoa yabellensis* **subsp. n.**, (gen.prp. ZSM G 19401).



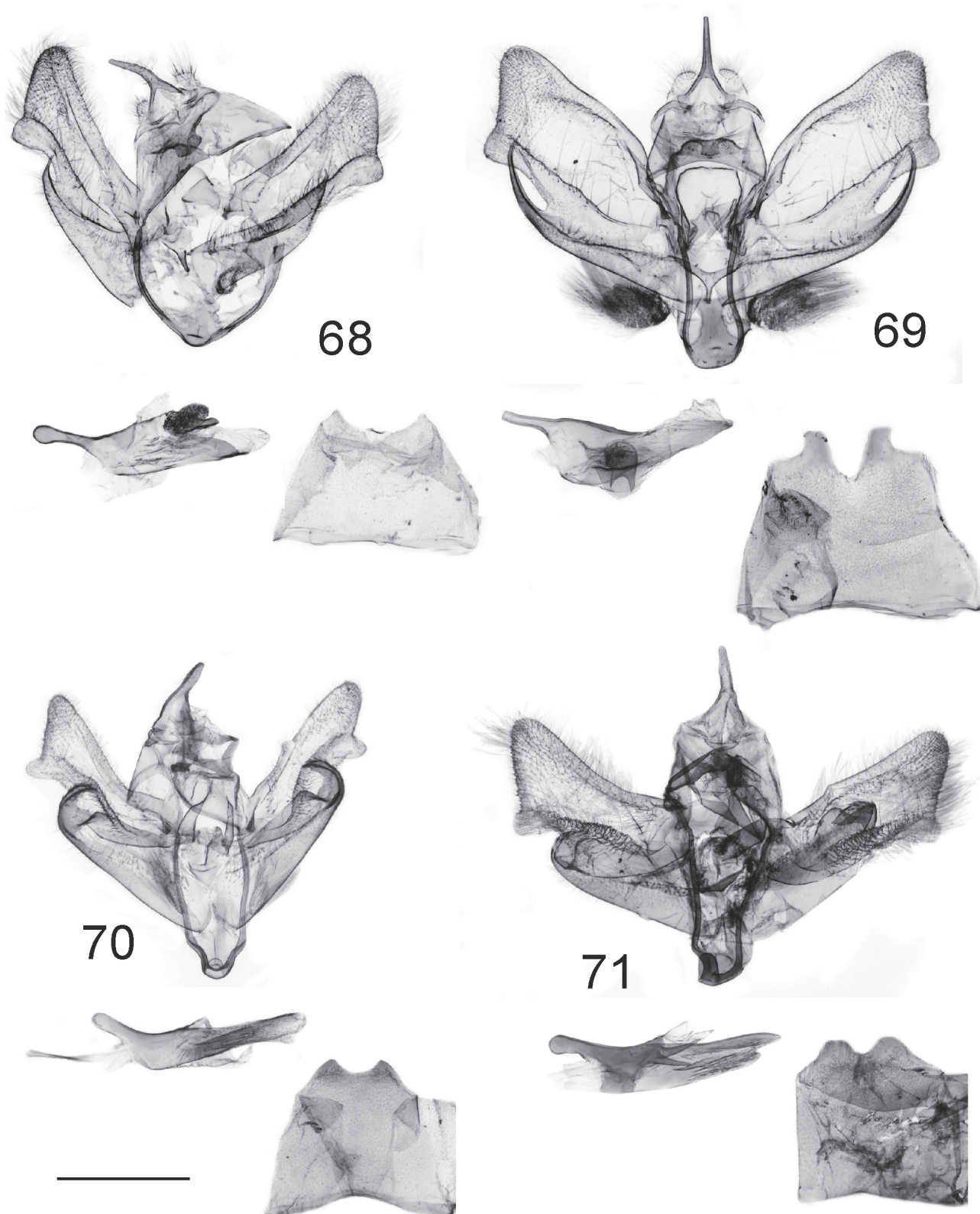
FIGURES 56–59. Male genitalia of Ethiopian *Prasinocyma* species. Scale Bar(s)—1 mm. In parantheses the ID-numbers of genitalia slides are given. 56. *Prasinocyma robusta* **sp. n.** (gen.prp. ZSM G 19467); 57. *Prasinocyma amharensis* **sp. n.** (gen.prp. ZSM G 19595); 58. *Prasinocyma jefferyi* Prout, 1930 (gen.prp. ZSM G 19647); 59. *Prasinocyma monikae* **sp. n.** (gen.prp. ZSM G 19404).



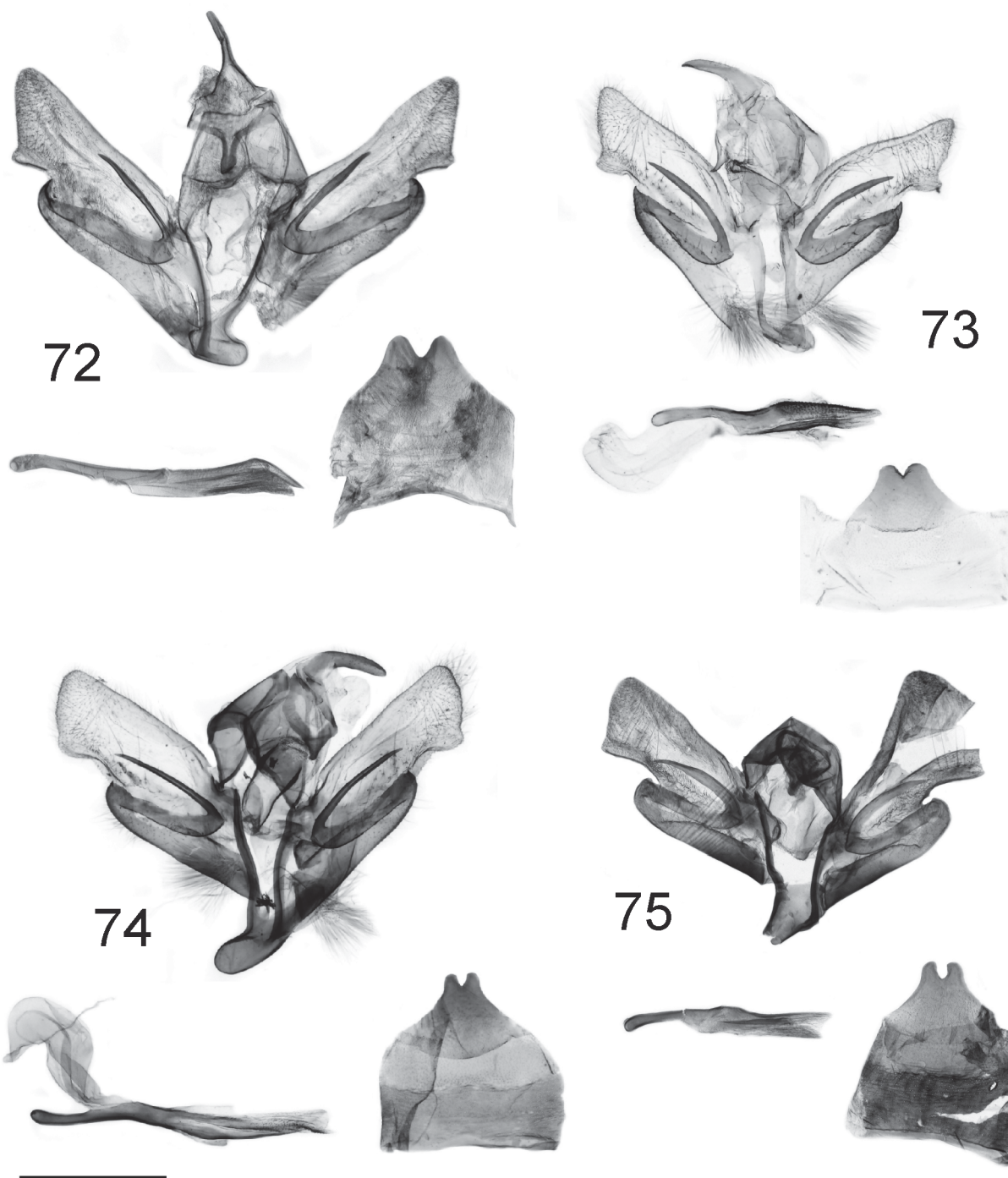
FIGURES 60–63. Male genitalia of Ethiopian *Prasinocyma* species. Scale Bar(s)—1 mm. In parantheses the ID-numbers of genitalia slides are given. 60. *Prasinocyma corrugata* Fletcher, 1958 (gen.prp. DAEF GO1); 61. *Prasinocyma fusca* **sp. n.** (gen.prp. DAEF GP1); 62. *Prasinocyma leveneorum* **sp. n.** (gen.prp. ZSM G 19652); 63. *Prasinocyma germinaria* (Guenée, 1858) (gen.prp. ZSM G 19400).



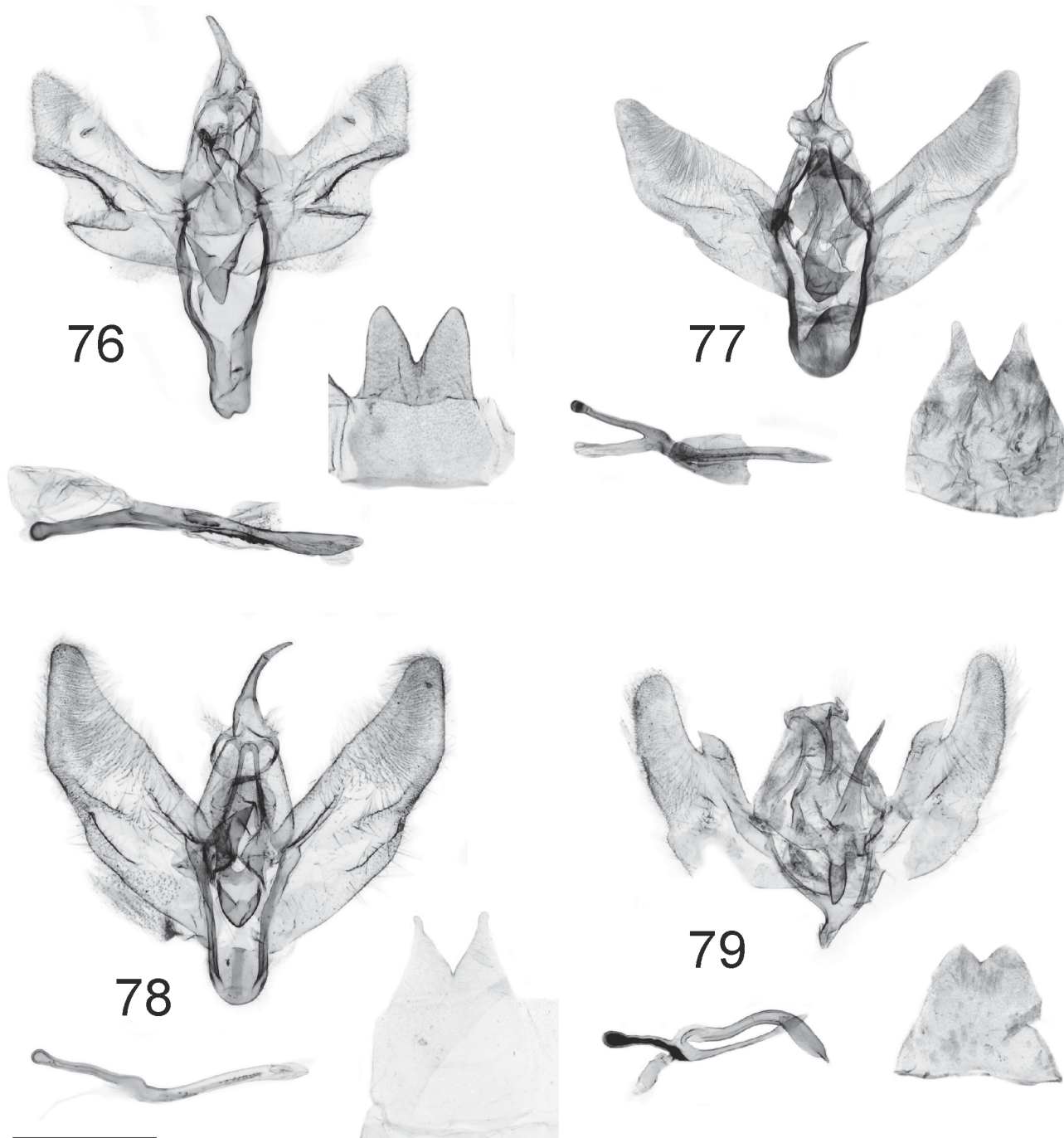
FIGURES 64–67. Male genitalia of Ethiopian *Prasinocyma* species. Scale Bar(s)—1 mm. In parantheses the ID-numbers of genitalia slides are given. 64. *Prasinocyma magica* **sp. n.** (gen.prp. ZSM G 16003); 65. *Prasinocyma batesi distans* **subsp. n.** (gen.prp. ZSM G 19591); 66. *Prasinocyma beryllaria* **sp. n.** (gen.prp. ZSM G 19463); 67. *Prasinocyma septentrionalis* **sp. n.** (gen.prp. ZSM G 16247).



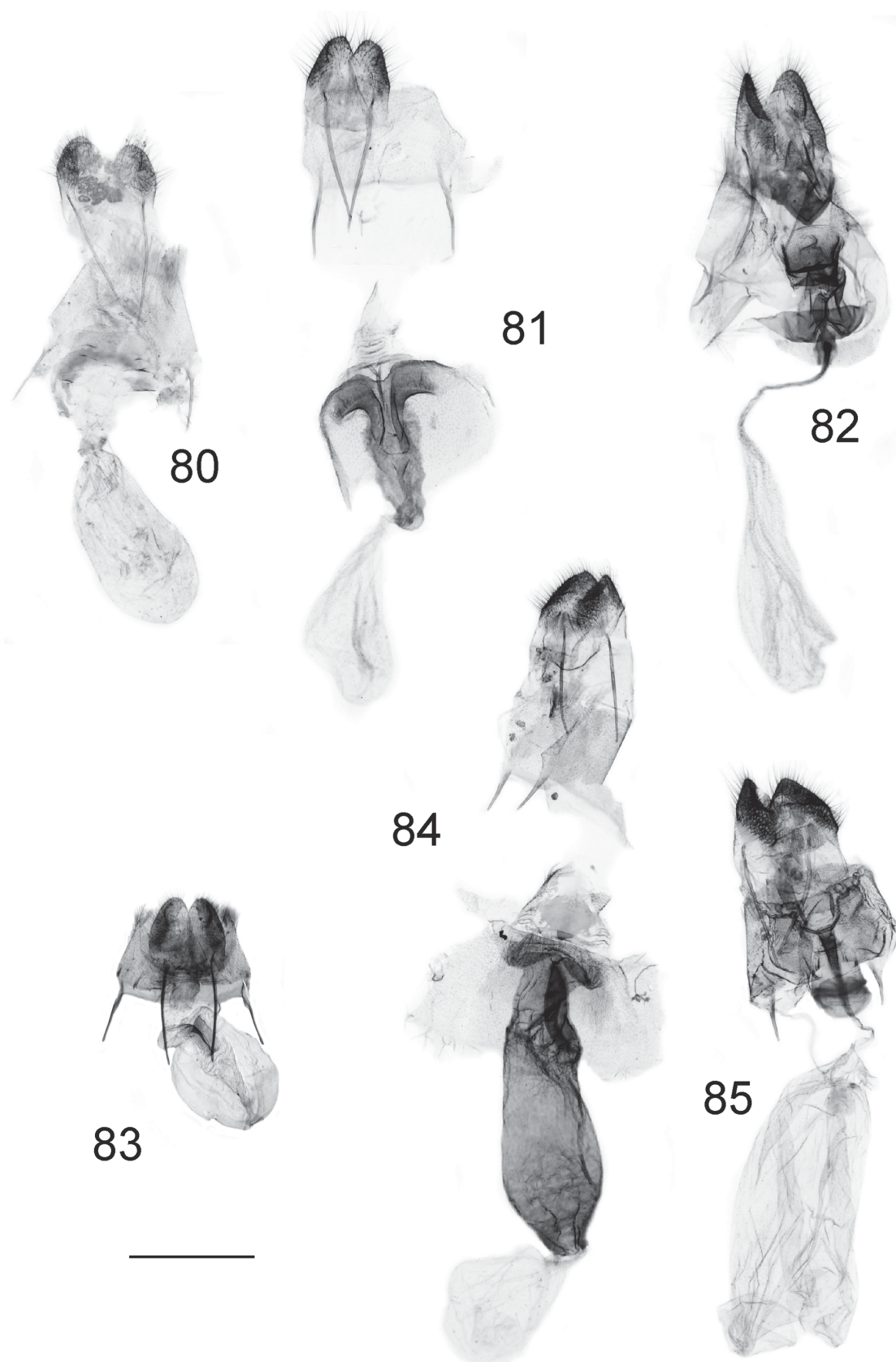
FIGURES 68–71. Male genitalia of Ethiopian *Prasinocyma* species. Scale Bar(s)—1 mm. In parantheses the ID-numbers of genitalia slides are given. 68. *Prasinocyma neglecta* Prout, 1921 (gen.prp. ZSM G 19648); 69. *Prasinocyma gajdacsii* Prout, 1930 (gen.prp. ZSM G 19530); 70. *Prasinocyma aetheraea* (Debauche, 1937) (gen.prp. ZSM G 19639); 71. *Prasinocyma fallax* sp. n. (gen.prp. ZSM G 19457).



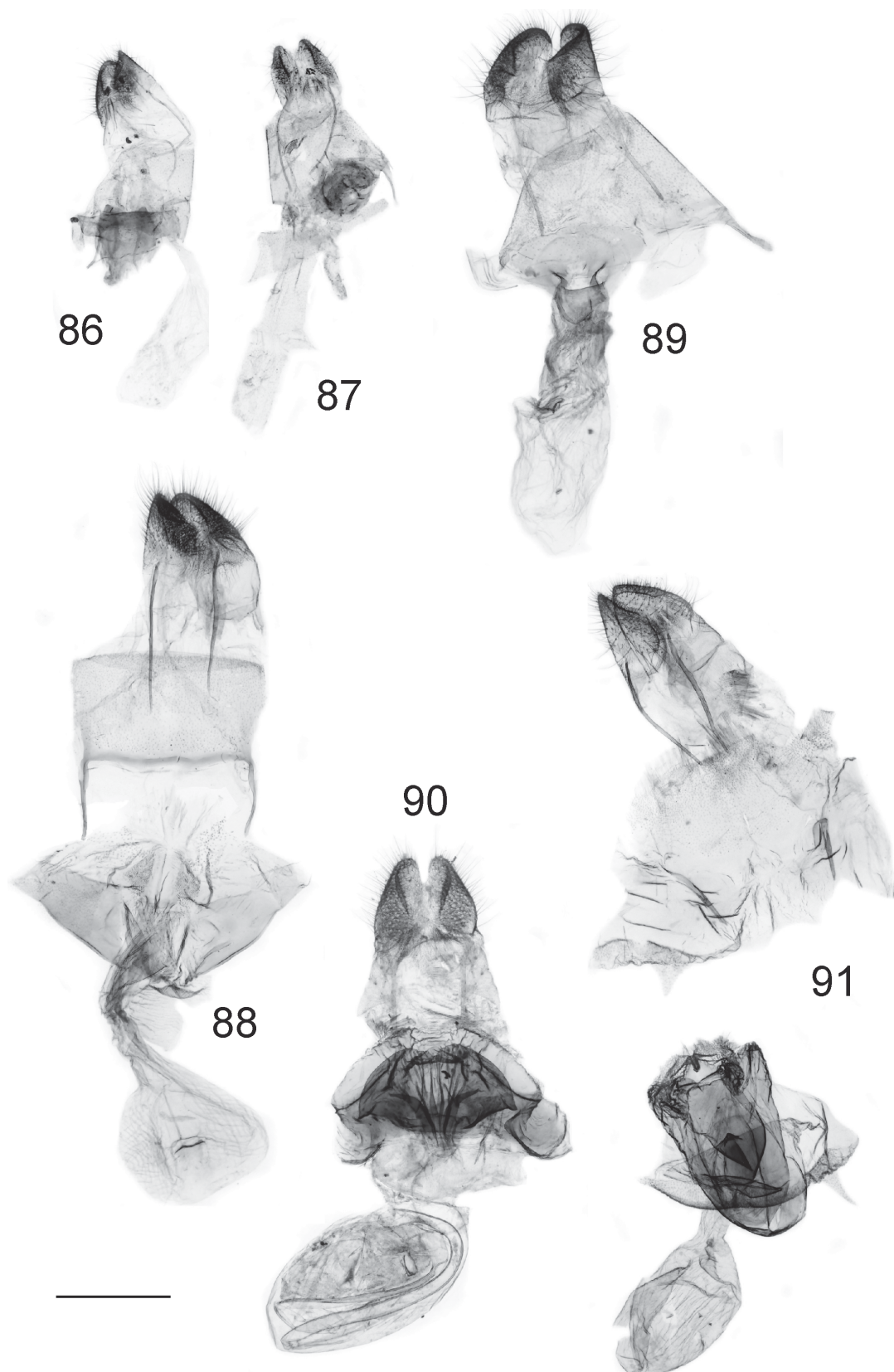
FIGURES 72–75. Male genitalia of Ethiopian *Prasinocyma* species. Scale Bar(s)—1 mm. In parentheses the ID-numbers of genitalia slides are given. 72. *Prasinocyma tricolorifrons* (Prout, 1913) (gen.prp. DAEF GV); 73. *Prasinocyma trematerrai* **sp. n.** (gen.prp. ZSM G 16248); 74. *Prasinocyma trematerrai simienensis* **subsp. n.** (gen.prp. ZSM G 19594); 75. *Prasinocyma albivenata* Herbulot, 1983 (gen.prp. DAEF GQ1).



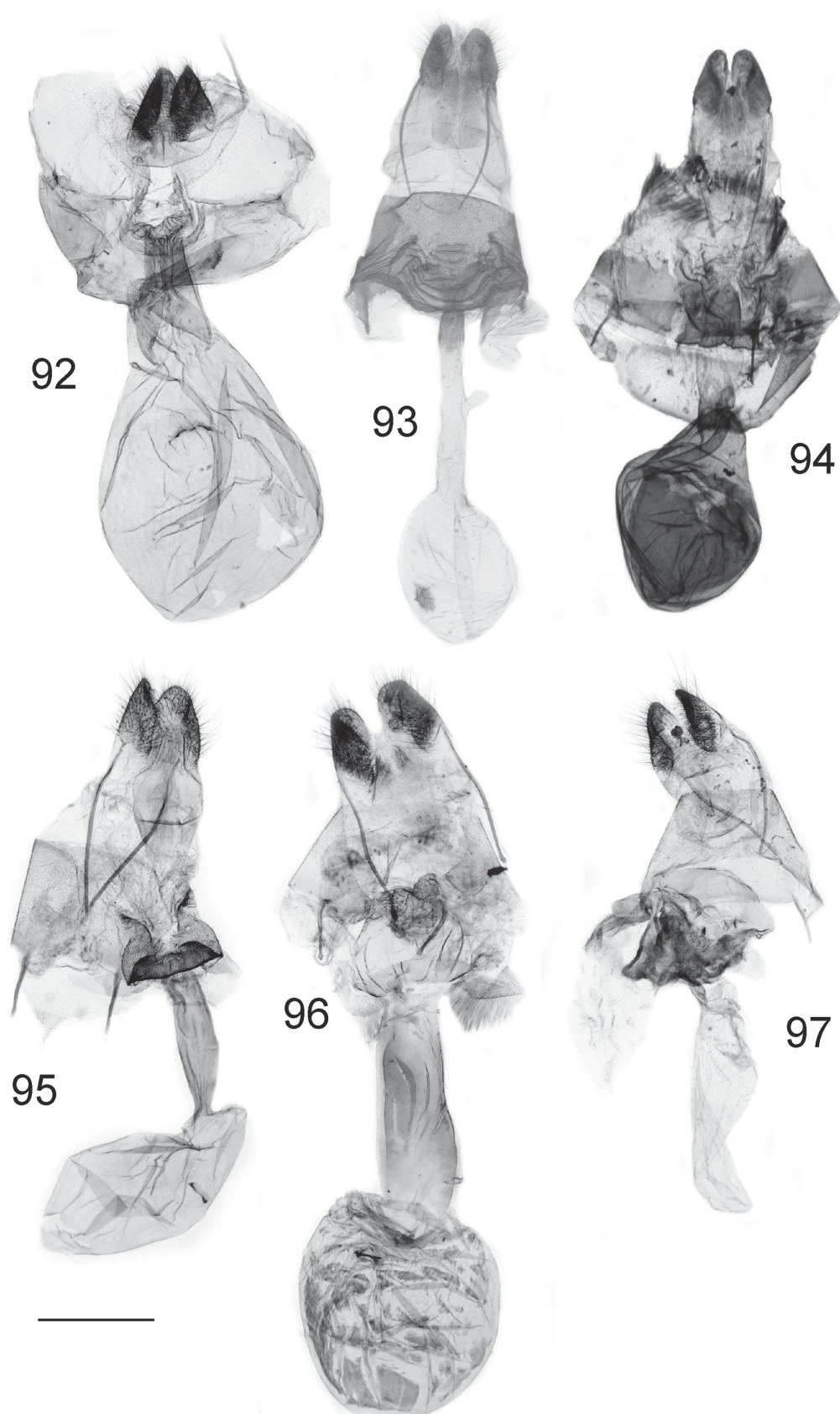
FIGURES 76–79. Male genitalia of Ethiopian *Prasinocyma* species. Scale Bar(s)—1 mm. In parantheses the ID-numbers of genitalia slides are given. 76. *Prasinocyma bifimbriata* Prout, 1930 (gen.prp. ZSM G 16142); 77. *Prasinocyma angulifera* **sp. n.** (gen.prp. DAEF GD); 78. *Prasinocyma stefani* **sp. n.** (gen.prp. ZSM G 16066); 79. *Prasinocyma albisticta* (Warren, 1901) (gen.prp. ZSM G 19643).



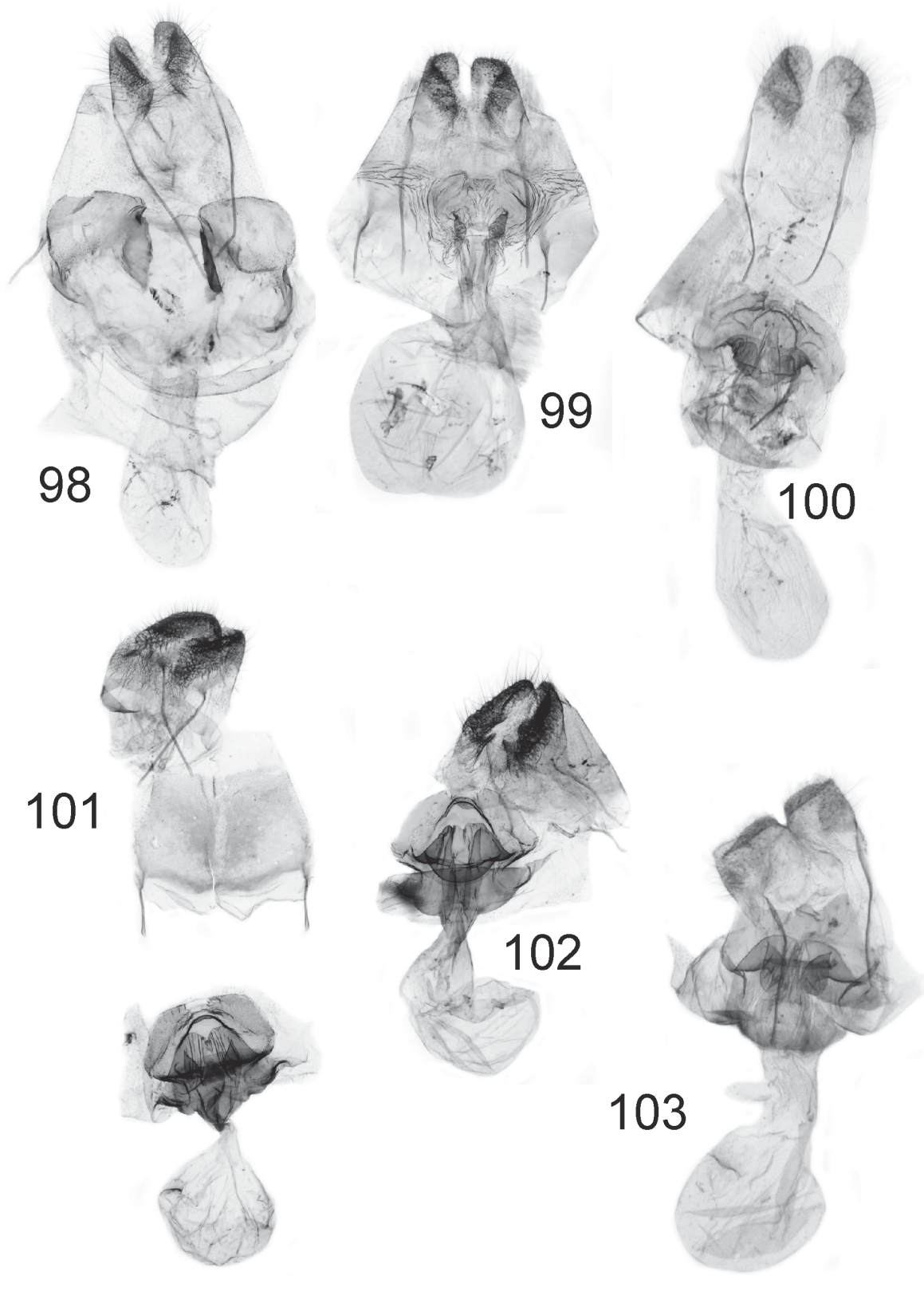
FIGURES 80–85. Female genitalia of Ethiopian *Prasinocyma* species. Scale Bar(s)—1 mm. In parentheses the ID-numbers of genitalia slides are given. Fig. 80. *Prasinocyma immaculata thiaucourti* Herbulot, 1993 (gen.prp. ZSM G 19439); 81. *Prasinocyma pedicata aethiopica* **subsp. n.** (gen.prp. DAEF GL); 82. *Prasinocyma bongaensis* **sp. n.** (gen.prp. ZSM G 15909); 83. *Prasinocyma pumilata* Fletcher, 1956 (gen.prp. ZSM G 19453); 84. *Prasinocyma tranquilla* Prout, 1917 (gen.prp. ZSM G 15923); 85. *Prasinocyma baumgaertneri* **sp. n.** (gen.prp. ZSM G 15962).



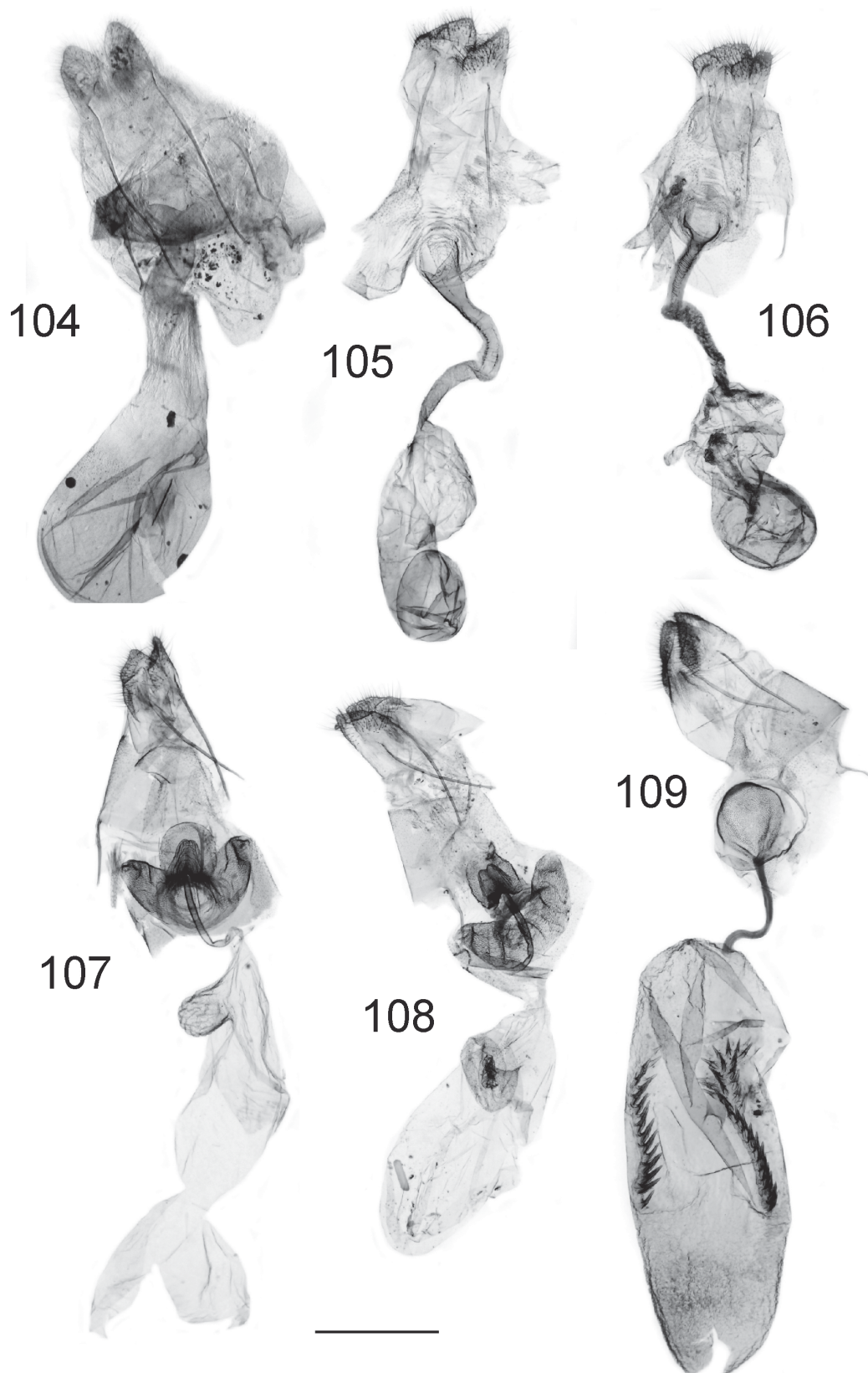
FIGURES 86–91. Female genitalia of Ethiopian *Prasinocyma* species. Scale Bar(s)—1 mm. In parantheses the ID-numbers of genitalia slides are given. 86. *Prasinocyma hailei* Debauche, 1937 (gen.prp. ZSM G 16089); 87. *Prasinocyma loveridgei* Prout, 1926, Kenya (cf. *perpulverata*) (gen.prp. ZSM G 16101); 88. *Prasinocyma shoa yabellensis* **subsp. n.** (gen.prp. ZSM G 15972); 89. *Prasinocyma robusta* **sp. n.** (gen.prp. ZSM G 16090); 90. *Prasinocyma amharensis* **sp. n.** (gen.prp. DAEF GU); 91. *Prasinocyma jefferyi* Prout, 1930 (gen.prp. ZSM G 15991).



FIGURES 92–97. Female genitalia of Ethiopian *Prasinocyma* species. Scale Bar(s)—1 mm. In parantheses the ID-numbers of genitalia slides are given. 92. *Prasinocyma fusca* **sp. n.** (gen.prp. ZSM G 16218); 93. *Prasinocyma germinaria* (Guenée, 1858) (ex NHM); 94. *Prasinocyma aquamarina* **sp. n.** (gen.prp. ZSM G 19455); 95. *Prasinocyma lutulenta* **sp. n.** (gen.prp. ZSM G 16040); 96. *Prasinocyma septentrionalis* **sp. n.** (gen.prp. ZSM G 19408); 97. *Prasinocyma neglecta* Prout, 1921 (gen.prp. ZSM G 16057).



FIGURES 98–103. Female genitalia of Ethiopian *Prasinocyma* species. Scale Bar(s)—1 mm. In parantheses the ID-numbers of genitalia slides are given. 98. *Prasinocyma gajdacs* Prout, 1930 (gen.prp. DAEF GT); 99. *Prasinocyma aetheraea* (Debauche, 1937) (gen.prp. ZSM G 19409); 100. *Prasinocyma tricolorifrons* (Prout, 1913) (gen.prp. ZSM G 19407); 101. *Prasinocyma trematerrai* **sp. n.** (gen.prp. ZSM G 16064); 102. *Prasinocyma trematerrai simienensis* **subsp. n.** (gen.prp. ZSM G 16088); 103. *Prasinocyma albivenata* Herbulot, 1983 (gen.prp. ZSM G 19405).



FIGURES 104–109. Female genitalia of Ethiopian *Prasinocyma* species. Scale Bar(s)—1 mm. In parantheses the ID-numbers of genitalia slides are given. 104. *Prasinocyma bifimbriata* Prout, 1930 (gen.prp. ZSM G 19412); 105. *Prasinocyma angulifera* sp. n. (gen.prp. DAEF G11); 106. *Prasinocyma stefani* sp. n. (gen.prp. ZSM G 16069); 107. *Prasinocyma albisticta* (Warren, 1901) (gen.prp. ZSM G 15902); 108. *Prasinocyma gemmifera* sp. n. (gen.prp. ZSM G 15908); 109. *Prasinocyma discipuncta* sp. n. (gen.prp. ZSM G 15901).

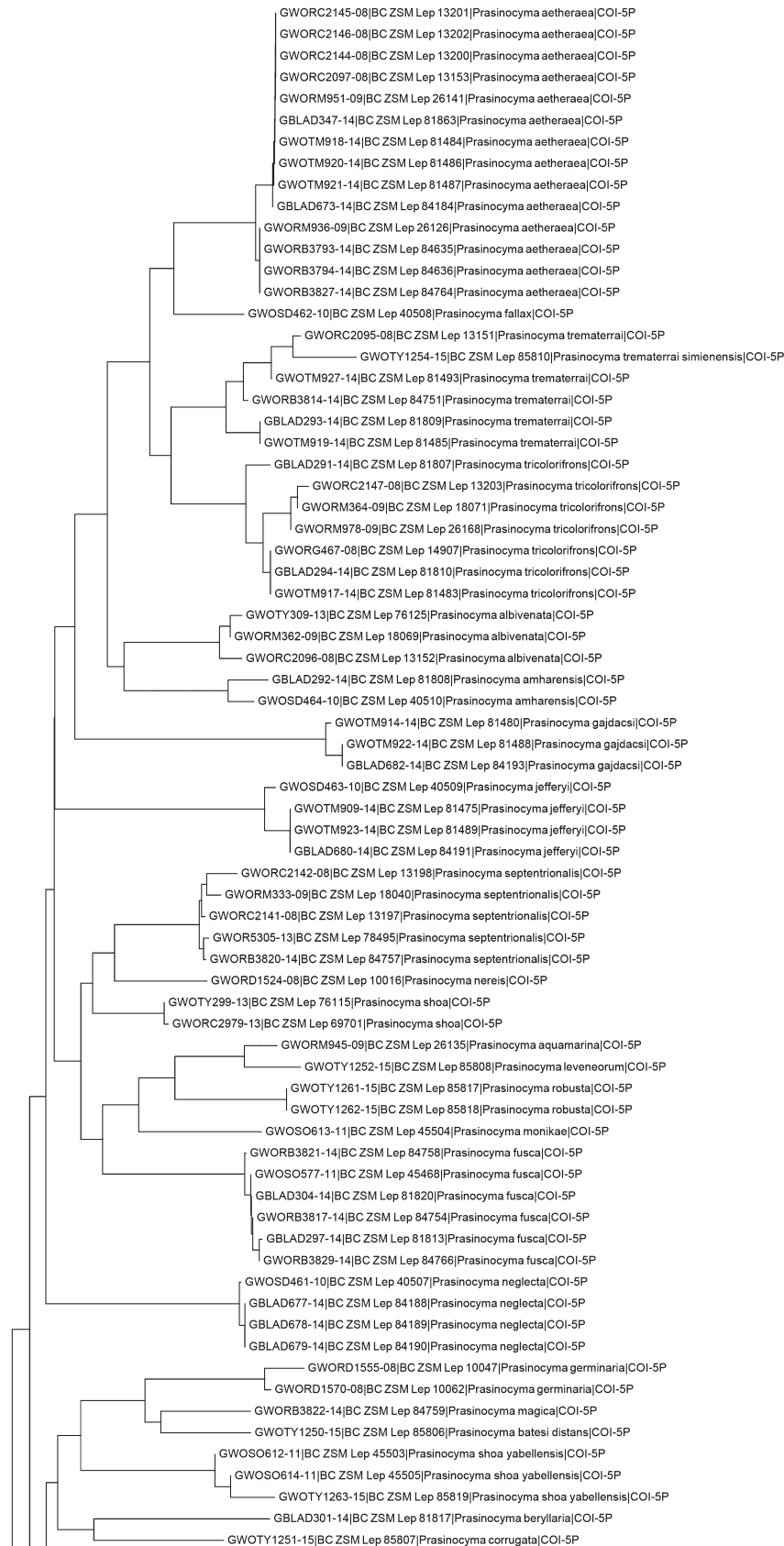


FIGURE 110. Neighbour Joining Tree of 135 specimens of the genus *Prasinocyma* from Ethiopia (BOLD alignment, Kimura 2 parameter, pairwise deletion, constructed with MEGA 6, Tamura *et al.* 2013). All sequence records, trace files and images are available and accessible on BOLD as a single citable dataset (doi: dx.doi.org/10.5883/DS-GEREETYE) [continued on the next page].

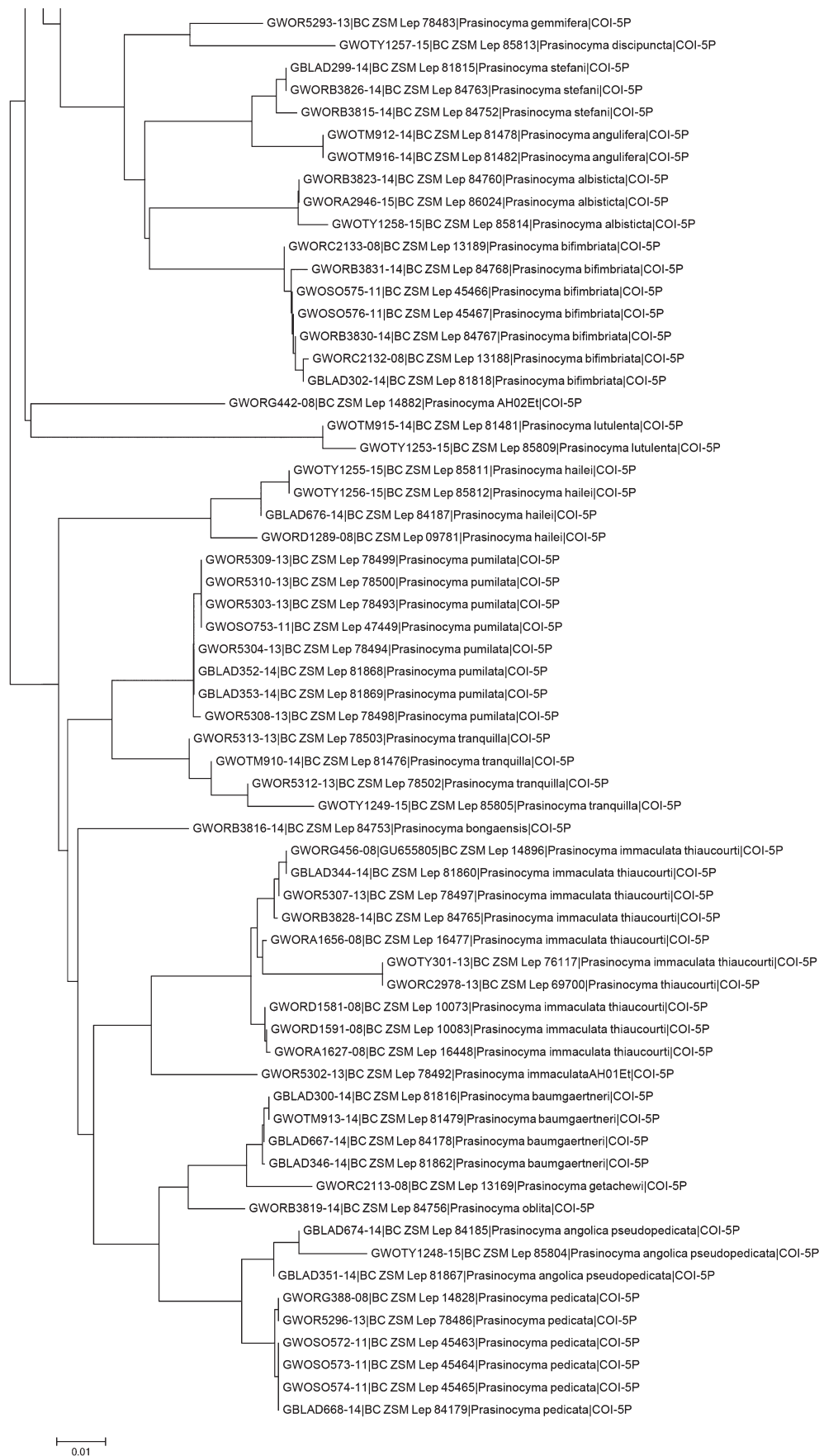


FIGURE 110. Continued.